

贝加莱产品使用手册



B&R PanelSystem



07/2002 版



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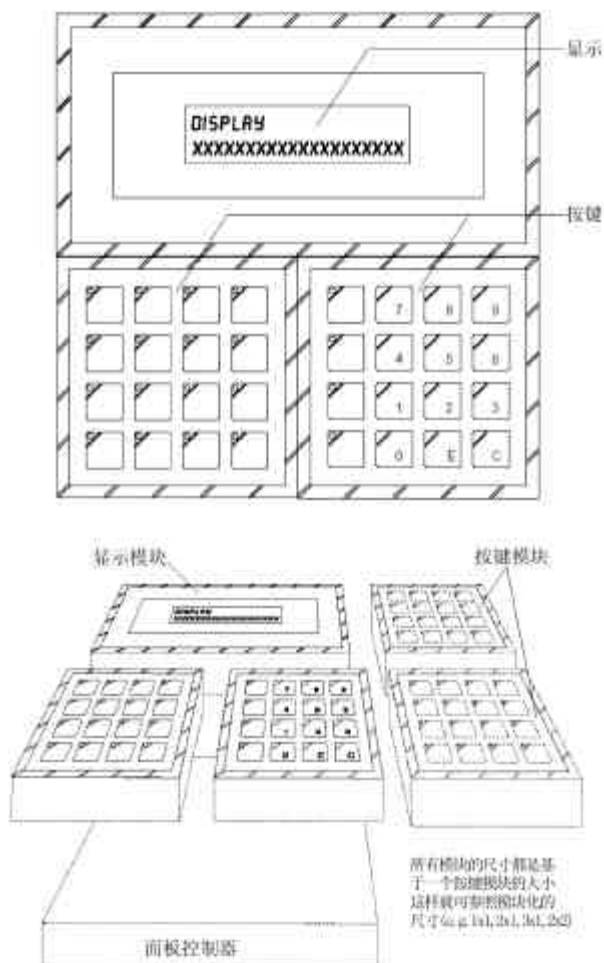
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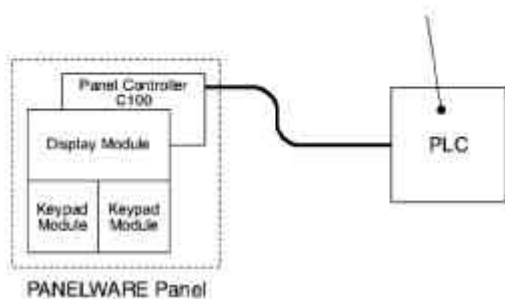
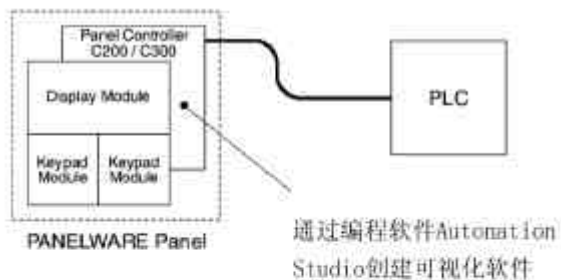
第一章 Panelware 概述

1. 操作面板的组成

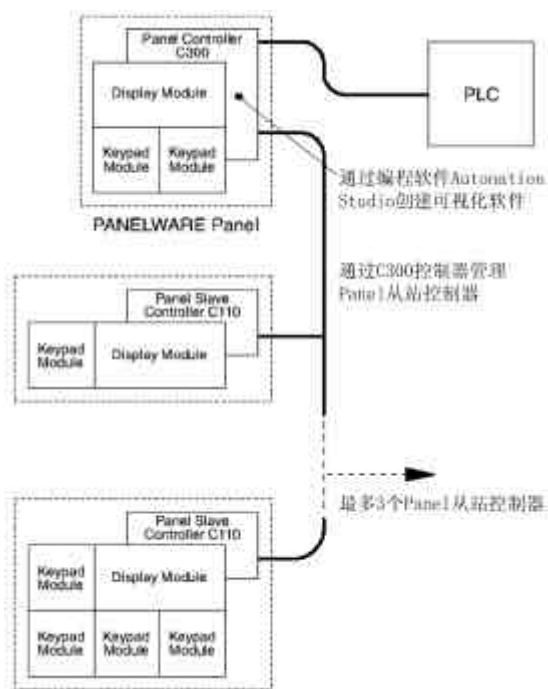


2. 面板的连接

2.1 与 PCC 的连接



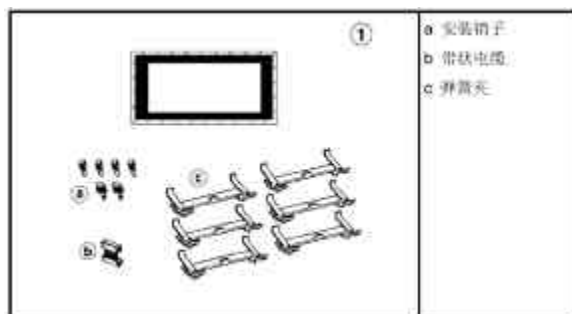
2.2 面板的扩展



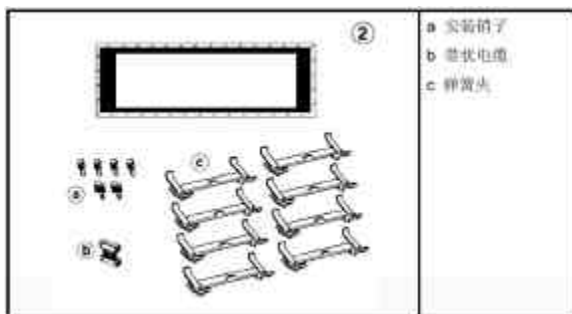
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1. 配件清单

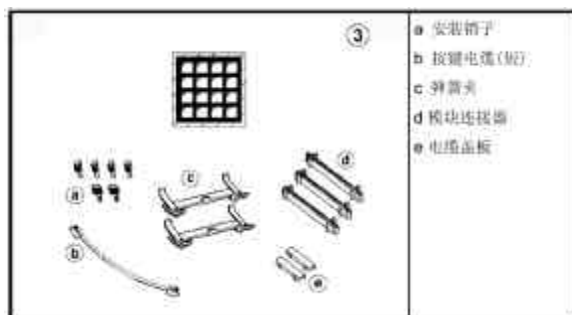
1.1 显示模块一



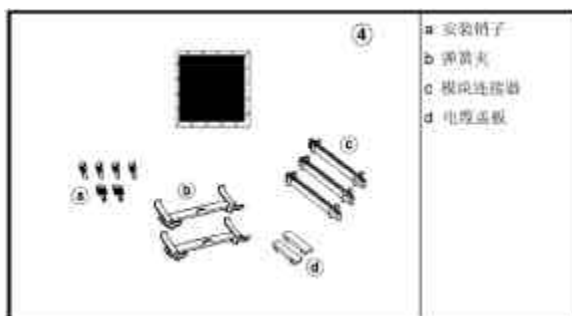
1.2 显示模块二



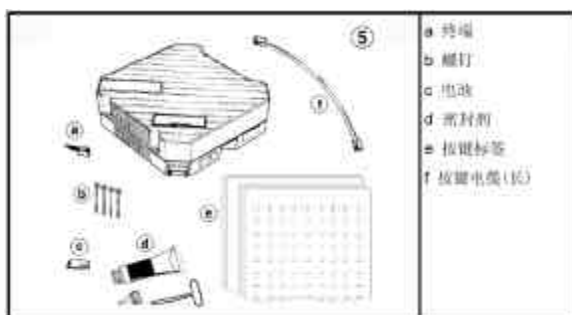
1.3 按键模块



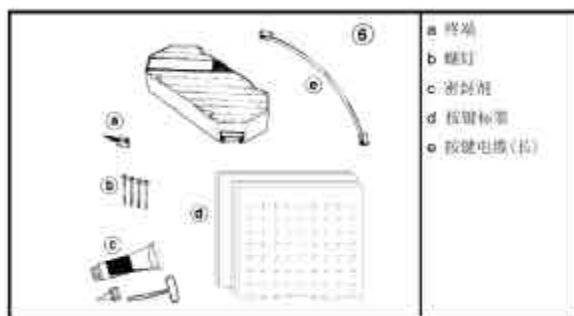
1.4 特殊按键模块



1.5 控制器 C200/C300

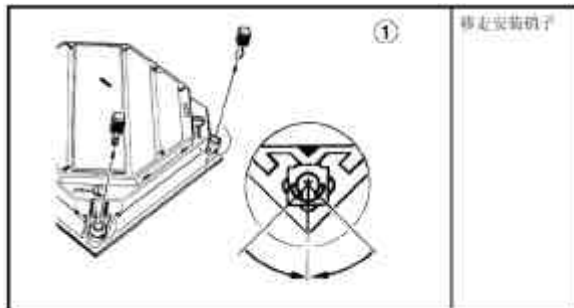


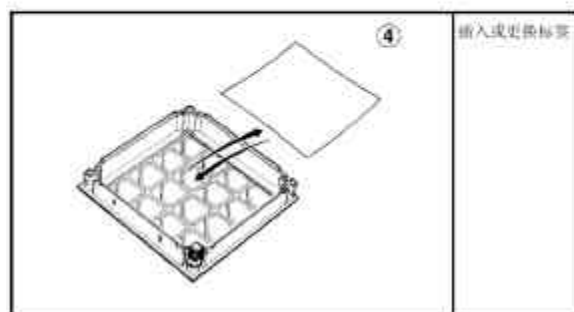
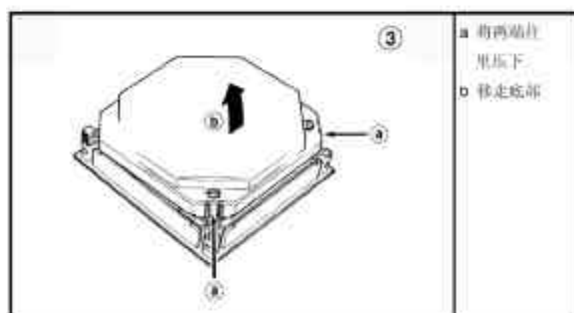
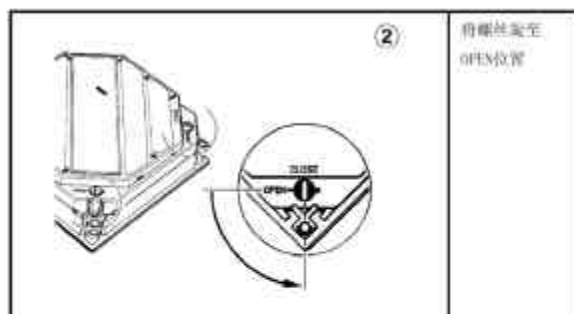
1.6 控制器 C100/C110

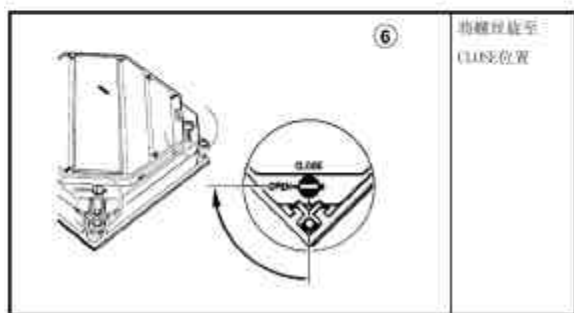
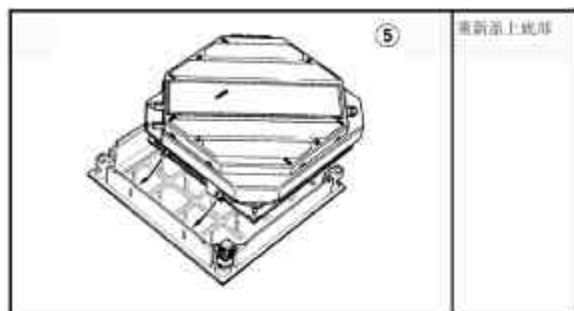


2. 装配

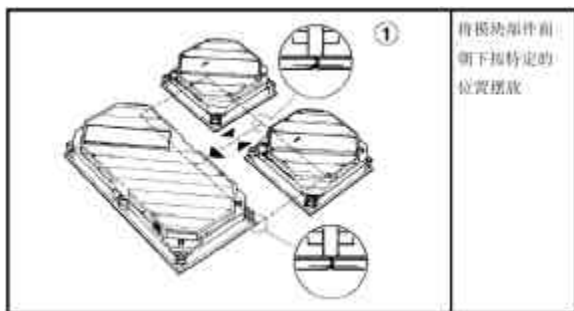
2.1 按键标签的装配

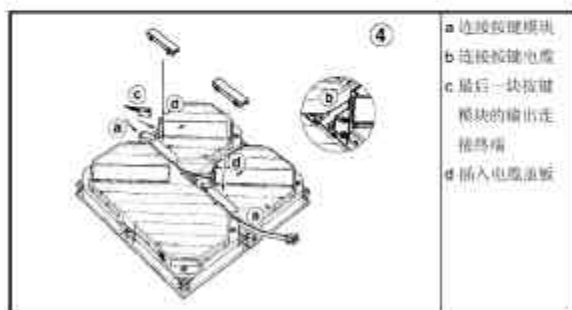
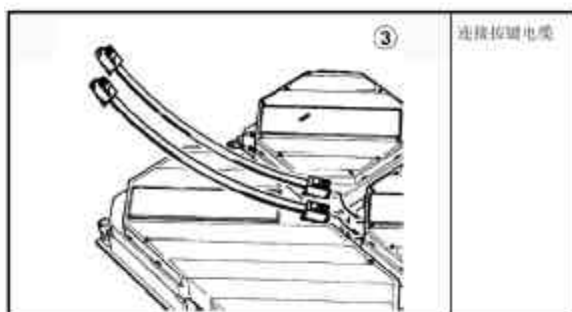
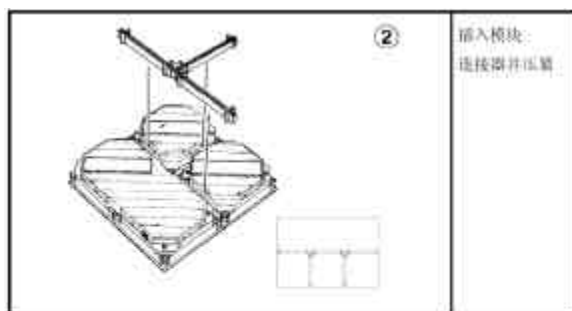


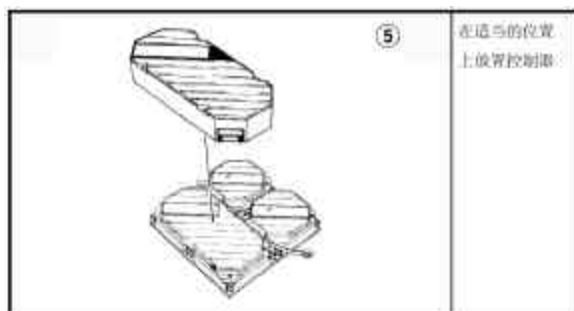




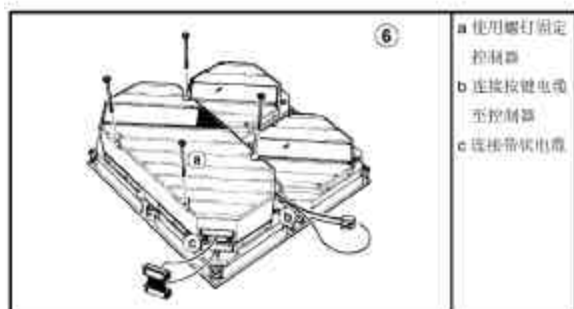
2.2 Panel 的装配





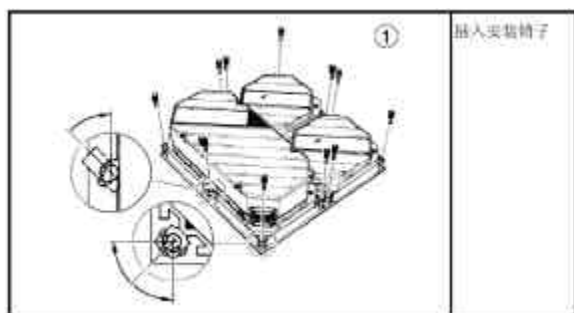


⑤ 在适当的位置
上放置控制器。

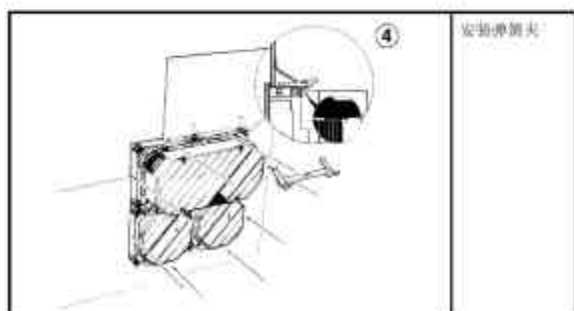
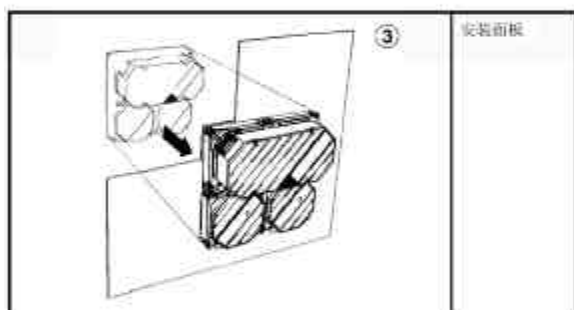
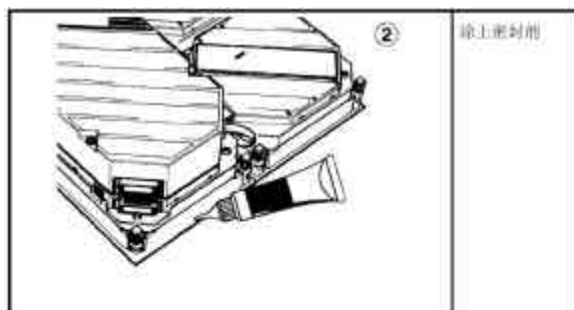


⑥ a 使用螺钉固定
控制器
b 连接按键电缆
至控制器
c 连接带线电缆

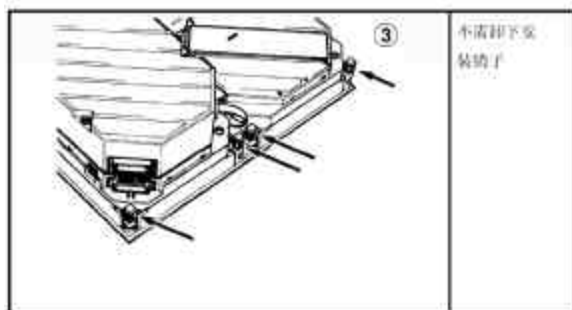
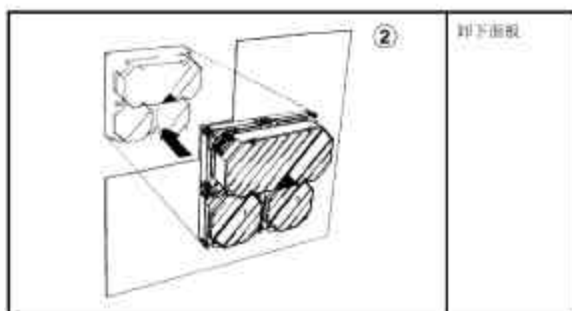
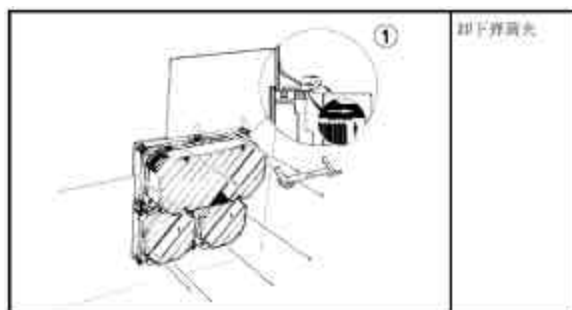
2.3 Panel 的安装

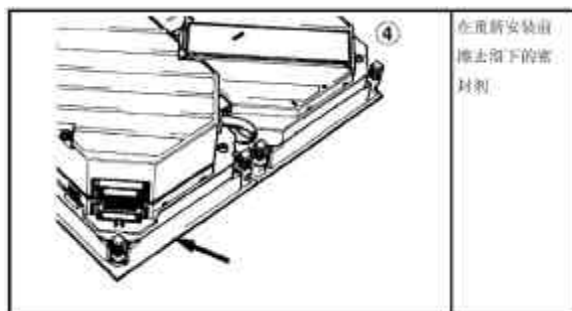


① 插入安装螺钉

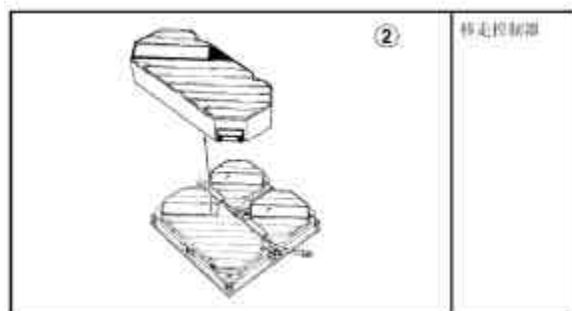
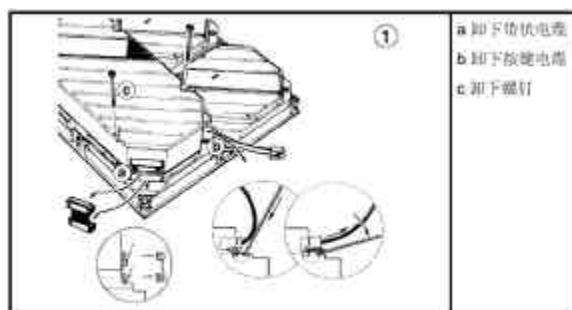


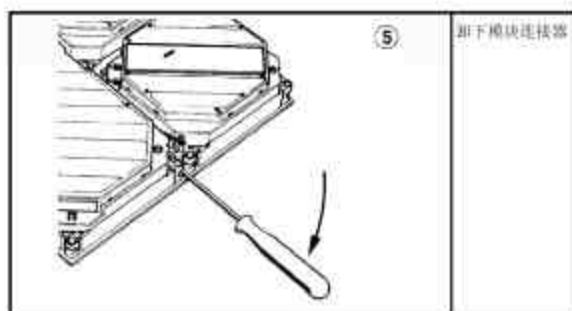
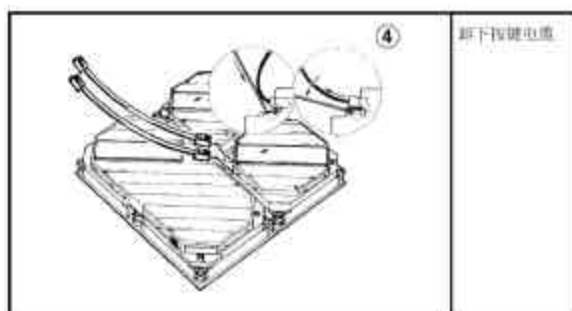
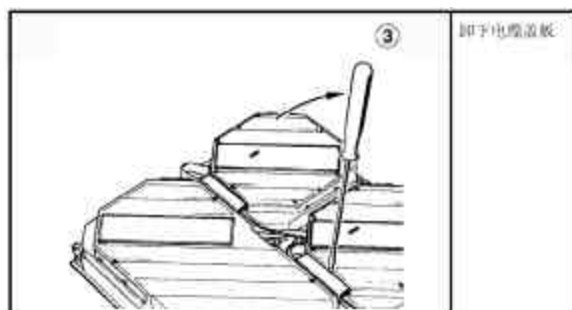
2.4 Panel 的拆卸



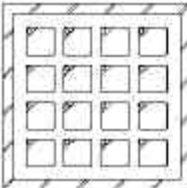
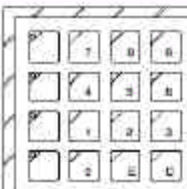
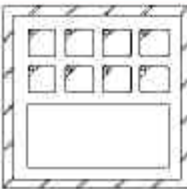
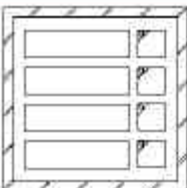
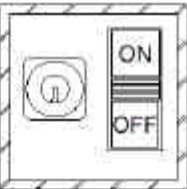
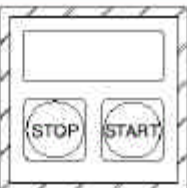


2.5 面板分解

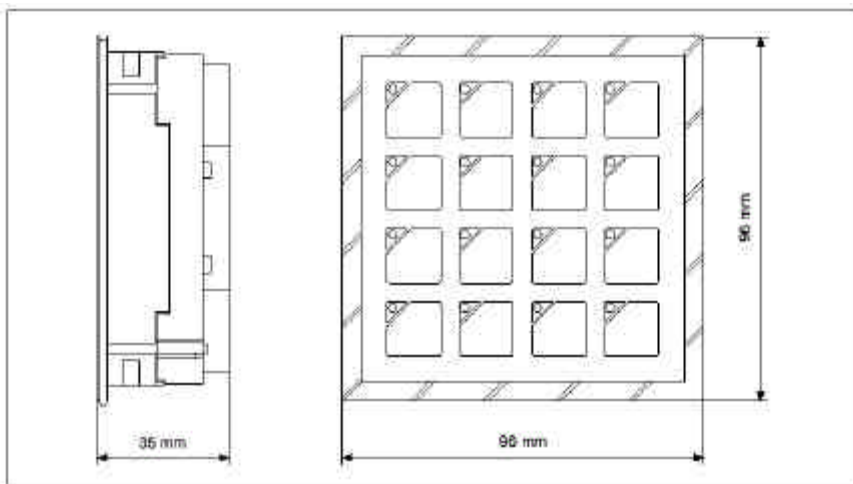




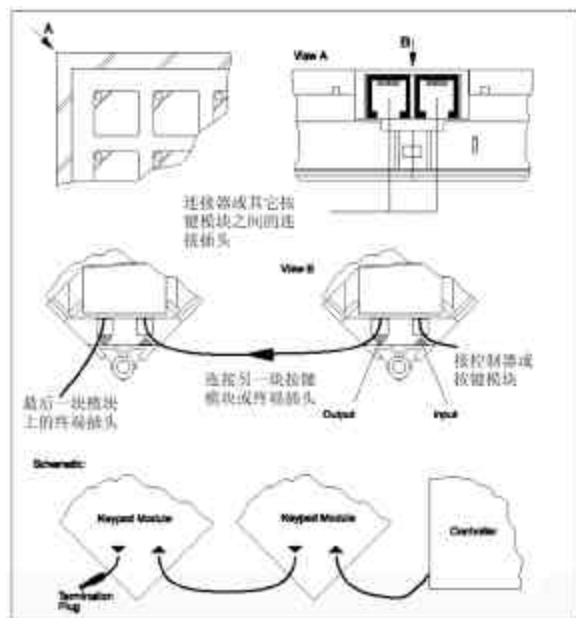
3. 按键模块

16 Keys 	Keys: 16 LEDs: 16
12 + 4 Keys 	Keys: 16 LEDs: 4
8 Keys 	Keys: 8 LEDs: 8 Label Fields: 1
4 Keys 	Keys: 4 LEDs: 4 Label Fields: 4
Dummy Module 	Keys: none LEDs: none
E-STOP 	E-STOP Button
Key Switch 	Key Switch: 1 On/Off Switch: 1
Start / Stop 	Keys: 2 Label Fields: 1

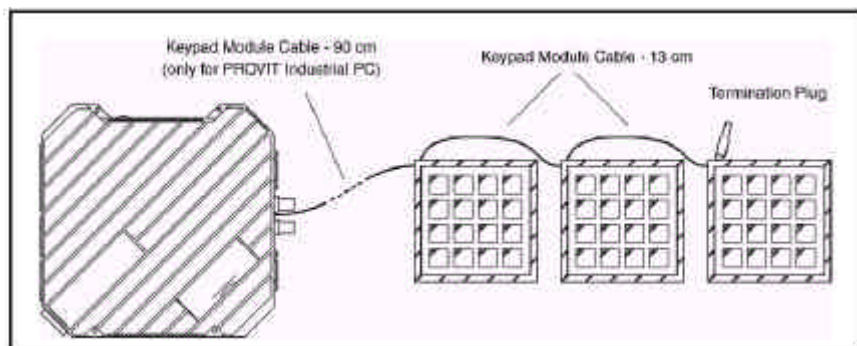
3.1 尺寸



3.2 连接



3.3 与控制器的连接



第三章 Panelware 显示模块

1. 概述

1.1 对比度(仅对 LCD 显示屏)

每个 LCD 显示模块都可以调节对比度。调节装置可在模块顶部找到。(见视图 A)

1.2 与面板控制器连接

模块顶部右侧可以找到用于连接
面板控制器的接头。(见视图 B)。

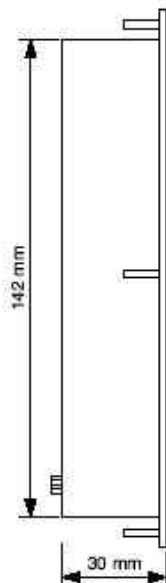
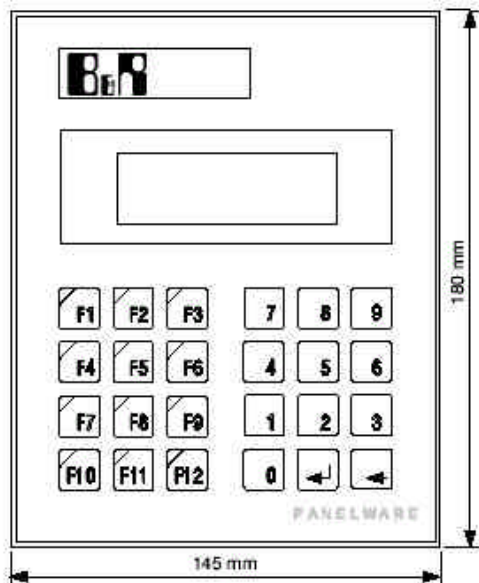
注意：

面板工作时，不可断开连接！

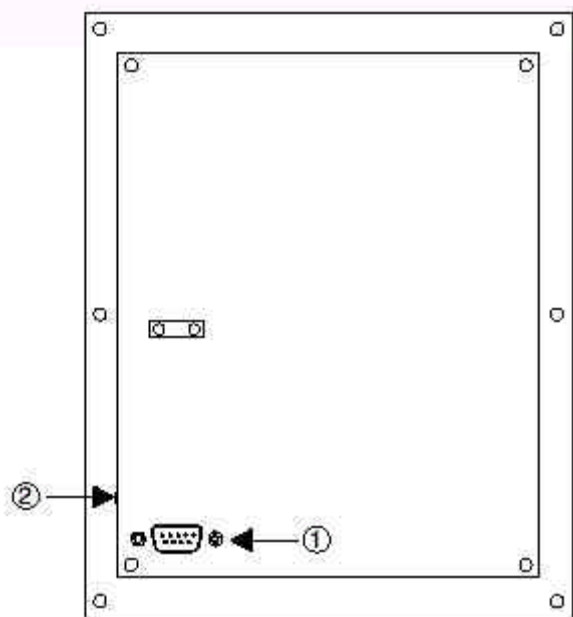


2. P125/126

2.1 尺寸



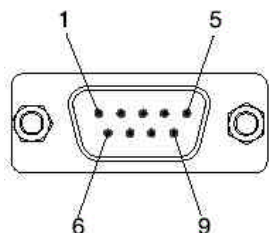
2.2 接头



① RS232 接口

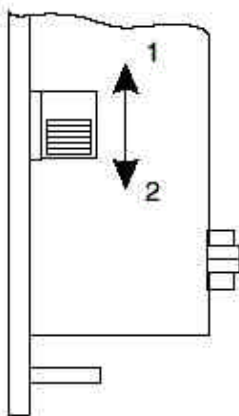
② 工作模式开关

2.2.1 RS232 接口



Pin	Description	
1	NC	Not used
2	RxD	Receive Data
3	TxD	Transmit Data
4	+5 V	Power supply for HMI
5	GND	Reference potential (ground)
6	+5 V	Power supply for HMI
7	NC	Not used
8	NC	Not used
9	NC	Not used

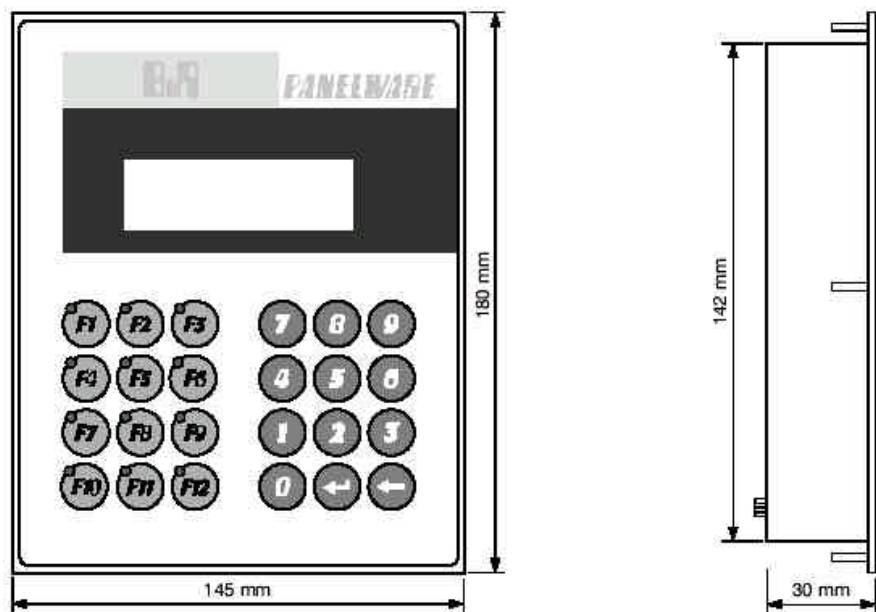
2.2.2 模式开关



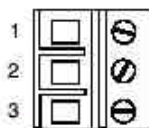
1. 示教模式
2. 工作模式

3. P127

3.1 尺寸

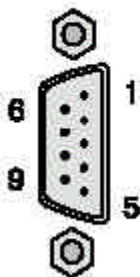


3.2 电源



Terminal	Symbol	Description
1	↓	Ground
2	-	GND ⊥
3	+	+24 VDC

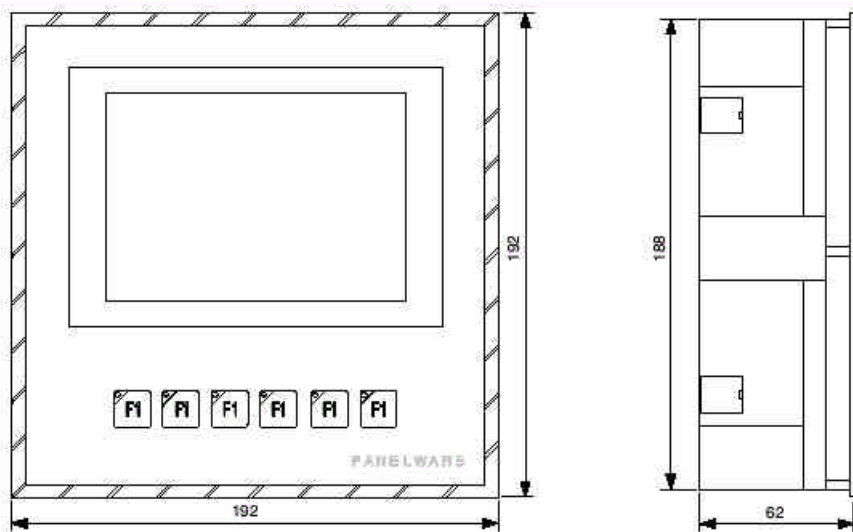
3.3 CAN 接口



PIN	CAN
1	NC
2	CAN_L
3	CAN_GND
4	NC
5	NC
6	NC
7	CAN_H
8	NC
9	NC

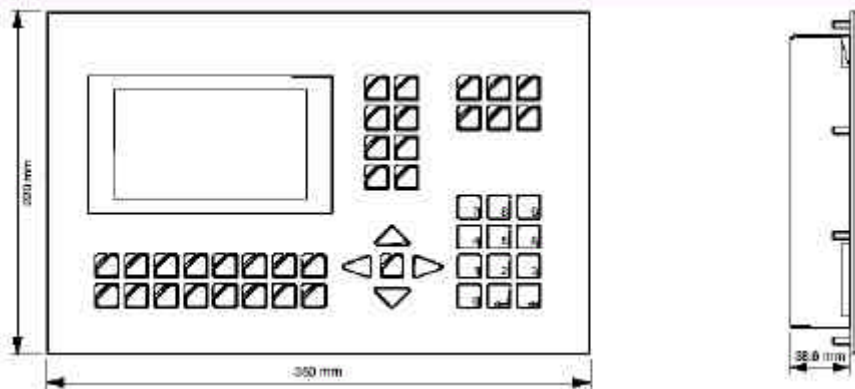
4. 4D1164

尺寸

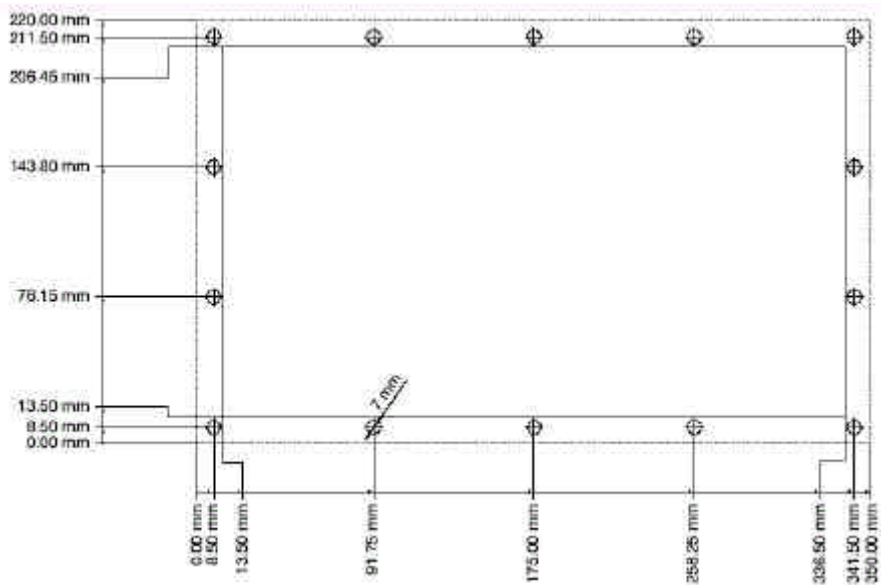


5. 4D1165

尺寸

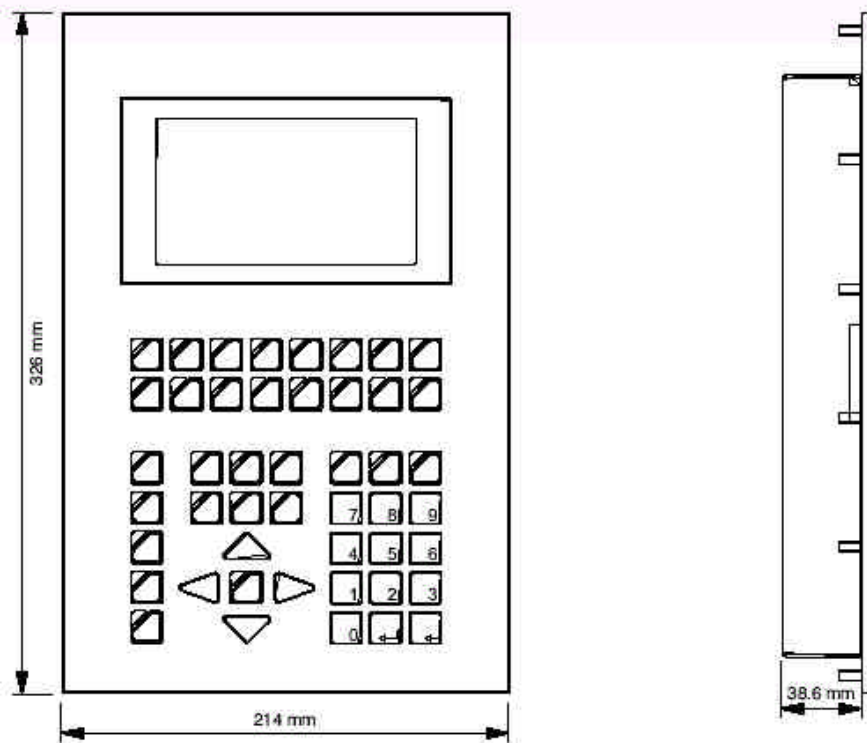


开孔尺寸

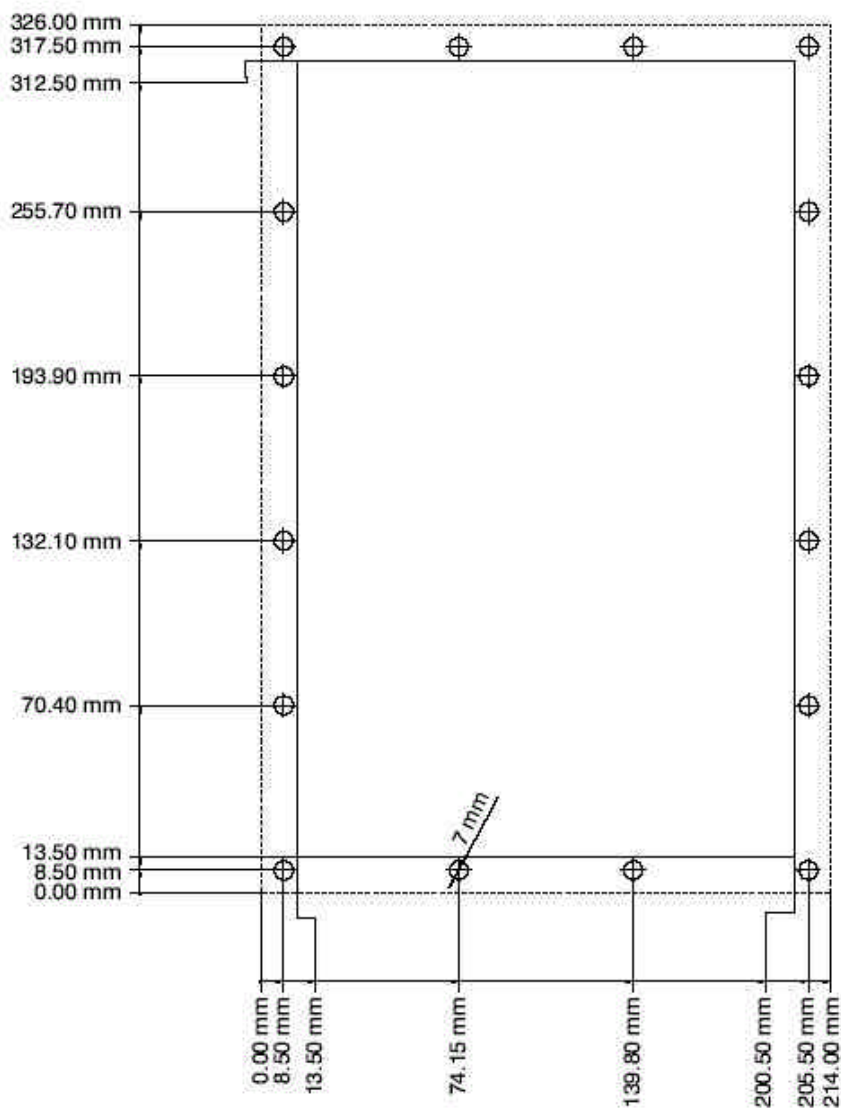


6. 4D1166

尺寸



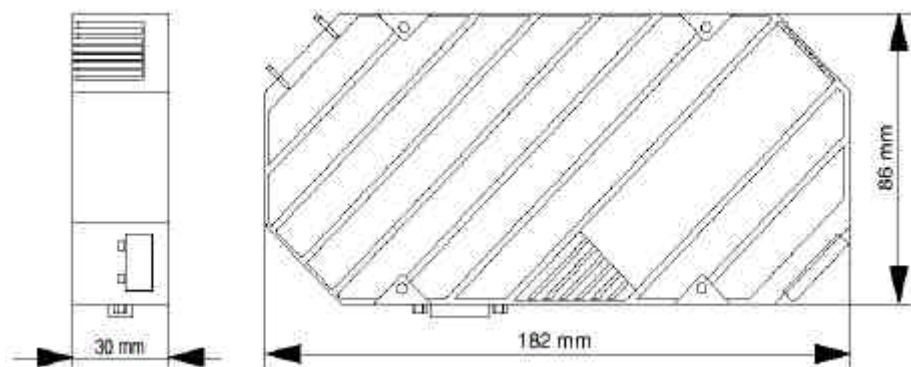
开孔尺寸



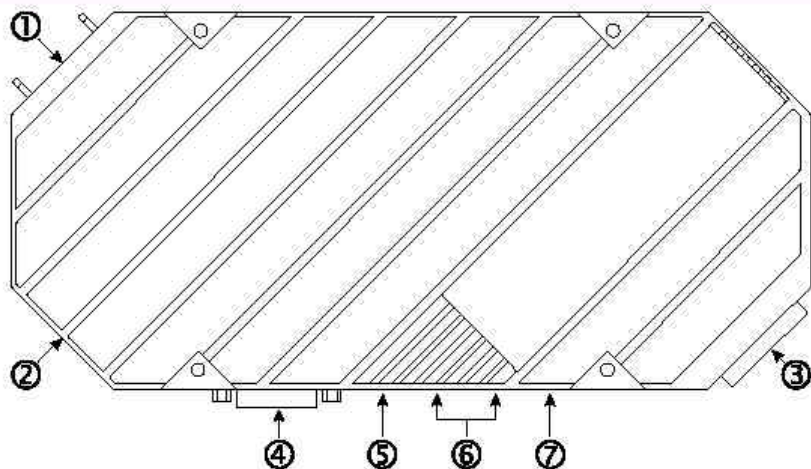
第四章 Panelware 控制器

1. C100

1.1 尺寸

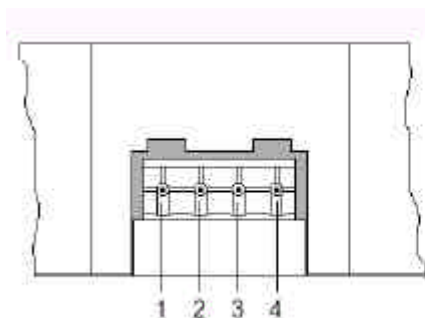


1.2 连接和操作组件



1. 显示模块接头
2. 键盘模块接头
3. 24V 电源接头
4. RS232 接口, 9 pin D 型头用于与 PC 或 PLC 连接
- 5-7 拨码开关
 5. 工作模式
 6. 奇偶 / 握手
 7. 波特率

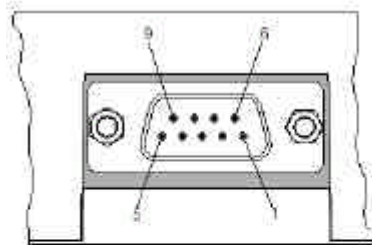
1.3 电源电压



Pin		Description
1	+	+24 VDC
2	-	GND 
3		Ground
4		Ground

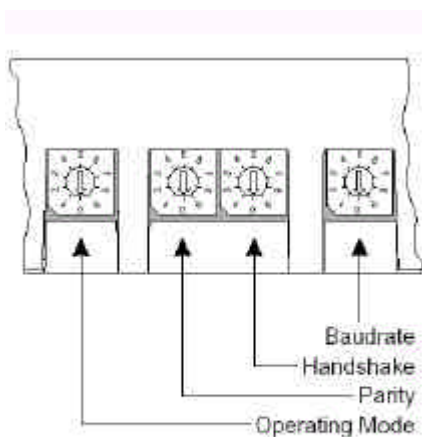
所有组件必须正确接地。

1.4 RS232 接口



Pin	Description	
1	NC	
2	RxD	Receive Data
3	TxD	Transmit Data
4	5 V	Power supply (max. 150 mA)
5	GND	
6	NC	
7	RTS	Request To Send
8	CTS	Clear To Send
9	NC	

1.5 拨码



Parity

Switch setting	Parity
0	None
1	Odd
2	Even
3 - 9	Not allowed

Handshake

Switch setting	Handshake
0	No handshake
1	XON/XOFF operation
2	Hardware handshake
3 - 9	Not allowed

操作模式

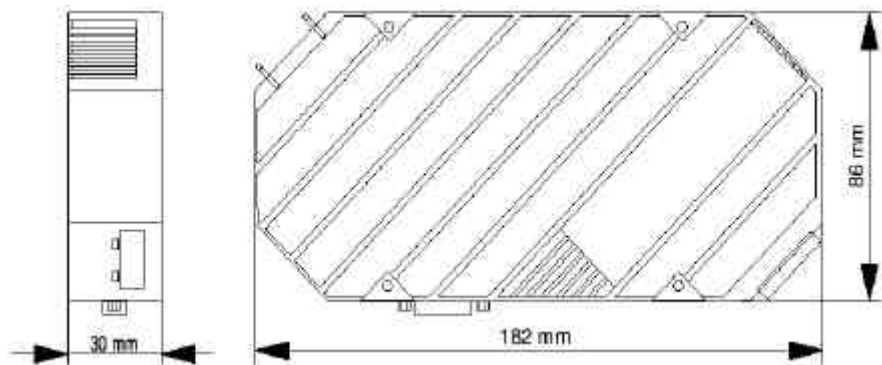
Switch setting	Parity
0	VT100 emulation
1	Reserved
2-9	Not allowed

波特率

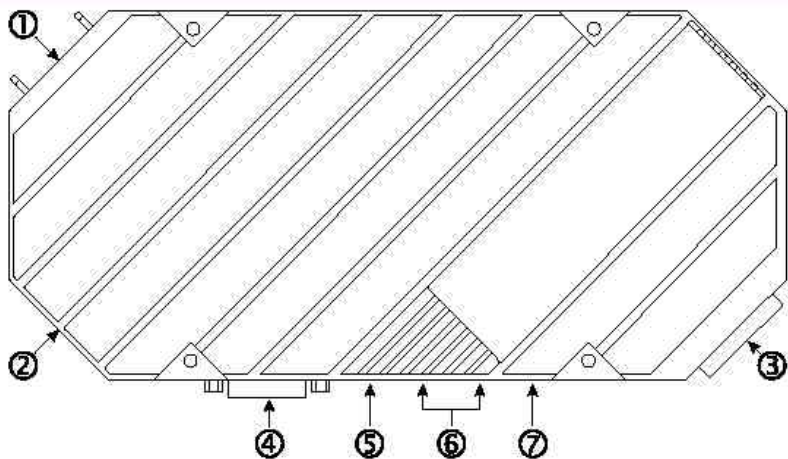
Switch setting	Bardrate
0	300
1	1200
2	4800
3	9600
4	19200
5	38400 (only in XON/XOFF operation)

2 C110

2.1 尺寸



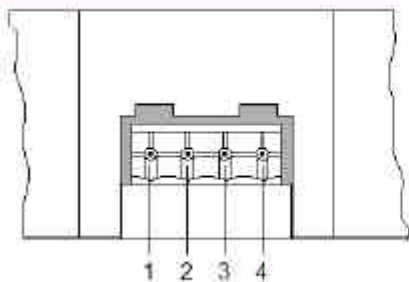
2.2 连接和操作组件



1. 显示模块接头
2. 按键模块接头
3. 24V 电源接头
4. RS485 接口, 9 Pin D 型头 (母) 用于与 C300 面板控制器连接
- 5-7 拨码
 5. 工作模式
 6. 站点号
 7. 波特率

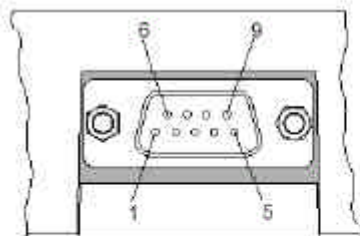
2.3 电源

所有组件必须正确接地。



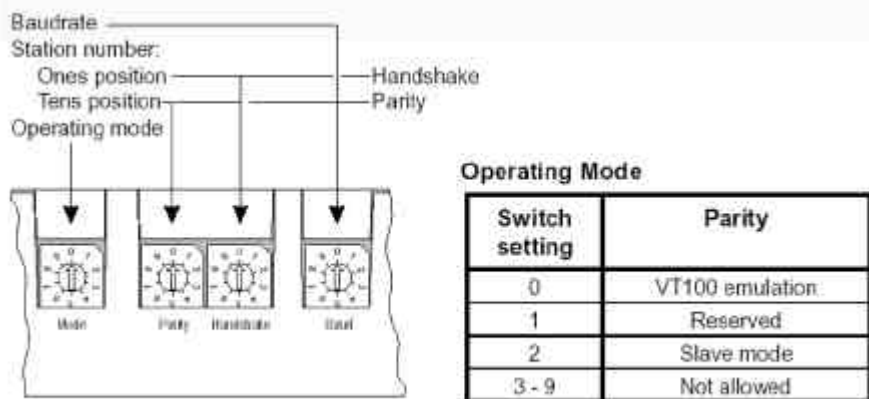
Pin		Description
1	+	+24 VDC
2	-	GND 
3		Ground
4		Ground

2.4 RS485 / RS422 接口



Pin	Description	
	RS485	RS422
1	Shield	
2	NC	NC
3	DATA	RxD
4	reserved	TxD
5	GND	
6	5 V (max. 150 mA)	
7	NC	NC
8	DATA	RxD
9	reserved	TxD

2.5 拨码



操作模式 2 (Slave Mode) :

Switch	Meaning
Parity	Tens Places on the Station number
Handshake	Ones place on the Station number

操作模式 0 (VT100emulation) :

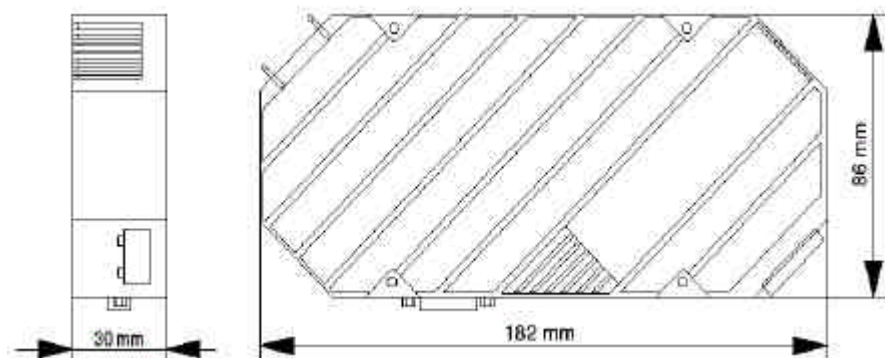
Switch setting	Parity	Handshake
0	None	No Handshake
1	Odd	XON/XOFF operation

波特率

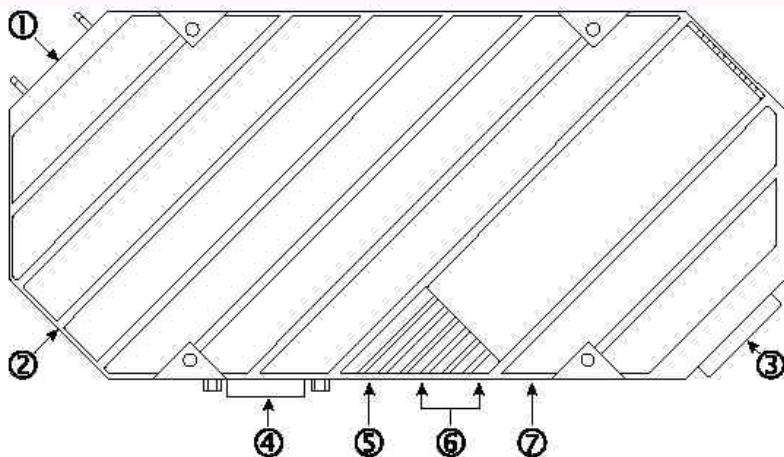
Switch setting	Baudrate	
	Operating Mode 0 (VT100 emulation)	Operating Mode 2 (Slave mode)
0	300	9600
1	1200	19200
2	4800	93750
3	9600	187500
4	19200	500000
5	38400 (only in XON/XOFF operation)	Not allowed
6	Not allowed	Not allowed
7	Not allowed	Not allowed
8	Not allowed	Not allowed
9	Not allowed	Not allowed

3 C130

3.1 尺寸

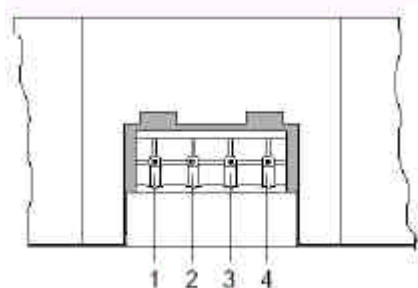


3.2 连接和操作组件



1. 显示模块接头
2. 按键模块接头
3. 24V 电源接头
4. CAN 接口, 9 Pin D 型头 (公) 用于与 PC 或 PLC 连接
- 5-7 拨码
 5. 未使用
 6. 波特率 / CAN 节点
 7. 未使用

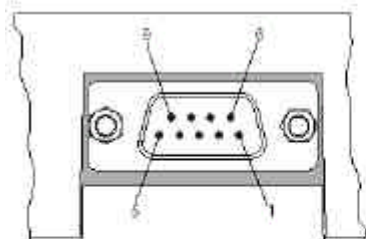
3.3 电源



Pin		Description
1	+	+24 VDC
2	-	GND 
3		Ground
4		Ground

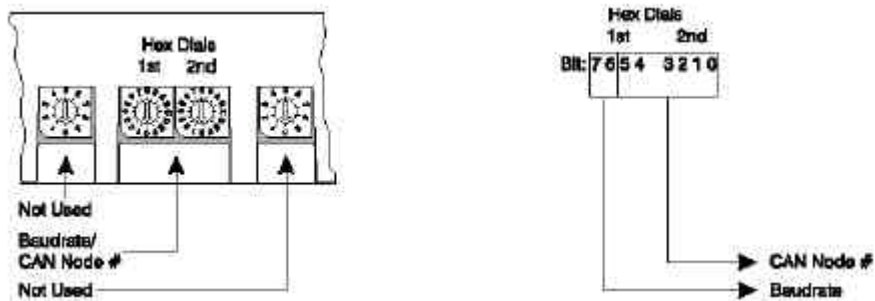
所有组件必须正确接线。

3.4 CAN 接口



Pin	Signal	Description
1	NC	not connected
2	CAN L	CAN Low
3	CAN GND	Can Ground
4	NC	not connected
5	NC	not connected
6	NC	not connected
7	CAN H	CAN High
8	NC	not connected
9	NC	not connected

3.5 拨码



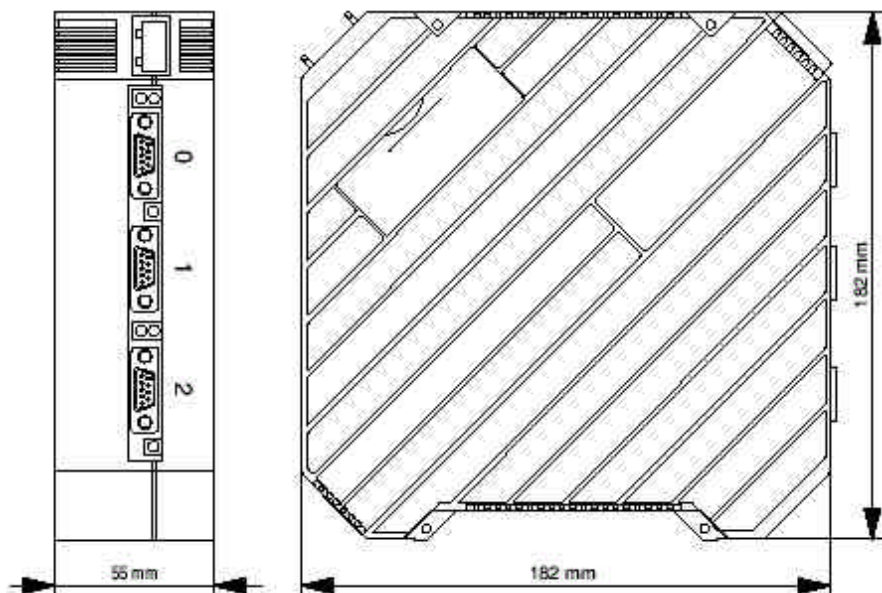
第一个 16 进制拨码的前二位设置波特率，第一个 16 进制拨码的后二位及第二个 16 进制拨码用于设置 CAN 站号，1-32 是可行的 CAN 站号，0, 33-63 不可用。

波特率的设置：

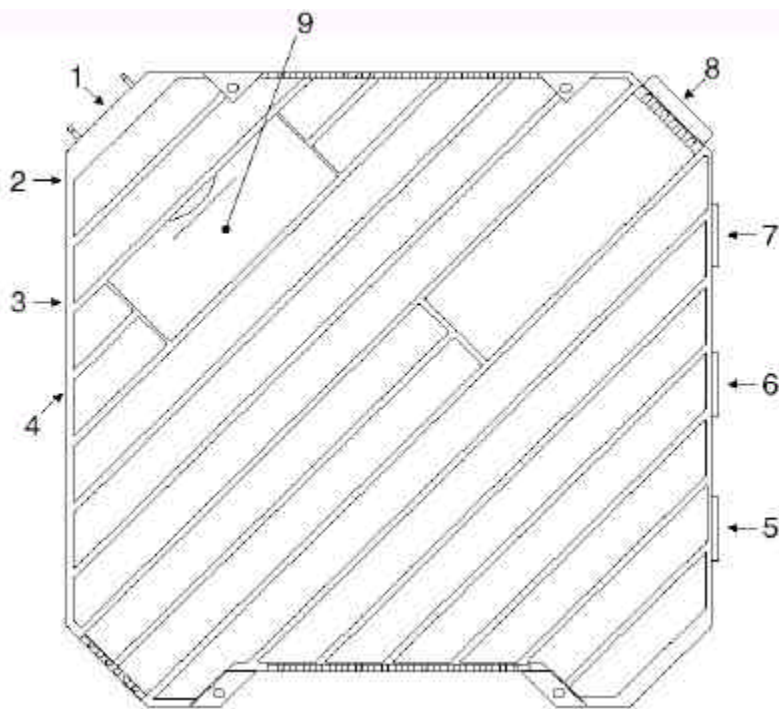
00-250K Band , 01-125K Band , 10-20K Band , 11-500K Band

4 C200

4.1 尺寸



4.2 连接和操作组件



1 显示模块接口

2 复位按钮

3 拨码

4 按键模块接口

5 IF2: RS422/RS485

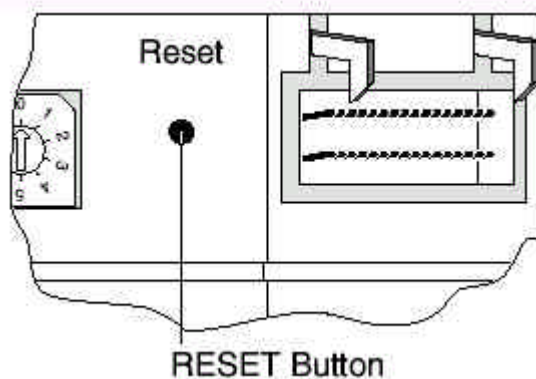
6 IF1: RS232

7 IF0: RS232 (连 PC)

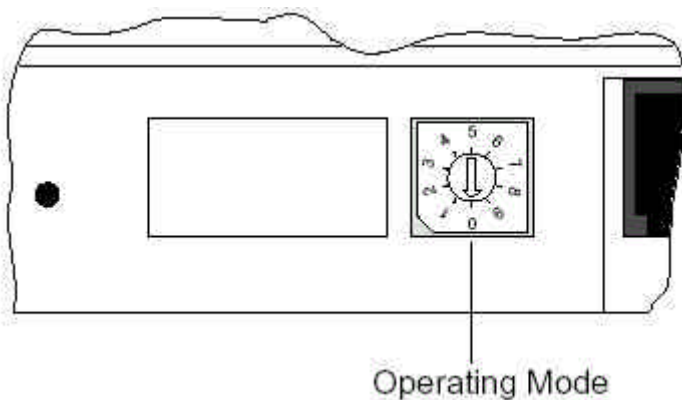
8 电源接口

9 电池仓盖

4.3 复位按钮



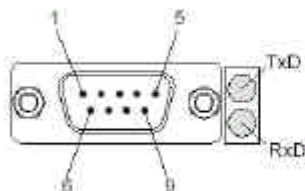
4.4 拨码



见“C2xx 与 C300 模式设置”

4.5 RS232 接口 (IF0)

D 型头 (公)

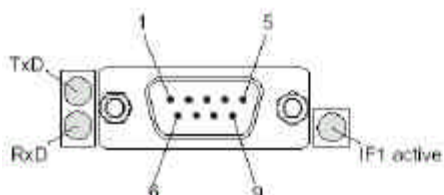


LED	Meaning
TxD	Send data over interface
RxD	Receive data over interface

Pin	Description	
1	NC	
2	RxD	Receive Data
3	TxD	Transmit Data
4	+ 5 V	Power Supply (200 mA)
5	GND	Ground
6	NC	
7	RTS	Request To Send
8	CTS	Clear To Send
9	NC	

4.6 RS232 接口 (IF1)

D 型头 (公)

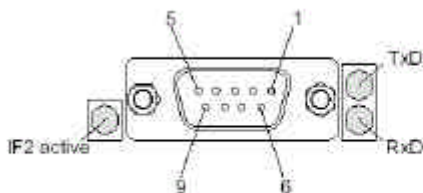


LED	Meaning
TxD	Send data over interface
RxD	Receive data over interface
IF1 active	Interface IF1 is active and IF2 is inactive.

Pin	Description	
1	NC	
2	RxD	Receive Data
3	TxD	Transmit Data
4	12 V	Power Supply for external converter (200 mA)
5	GND	
6	NC	
7	RTS	Request To Send
8	CTS	Clear To Send
9	NC	

4.7 RS422 / RS485 接口

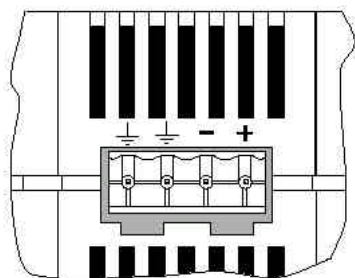
D 型头 (母)



LED	Meaning
TxD	Send data over interface
RxD	Receive data over interface
IF2 active	Interface IF2 is active and IF1 is inactive.

Pin	Description	
	RS422	RS485
1	Shield	
2	TxD	NC
3	RxD	DATA
4	NC	NC
5	GND	
6	+5VDC (200 mA) Galvanic isolation	
7	TxD	NC
8	RxD	DATA
9	NC	NC

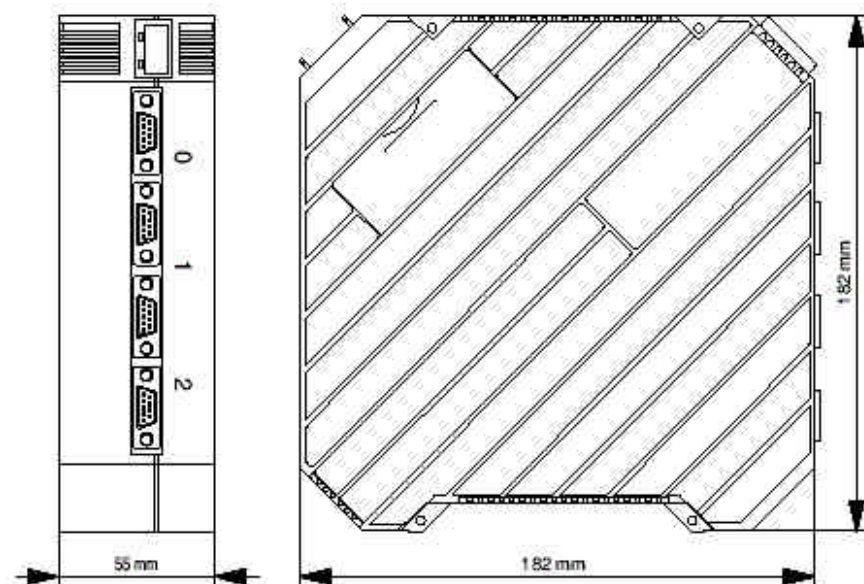
4.8 电源接口



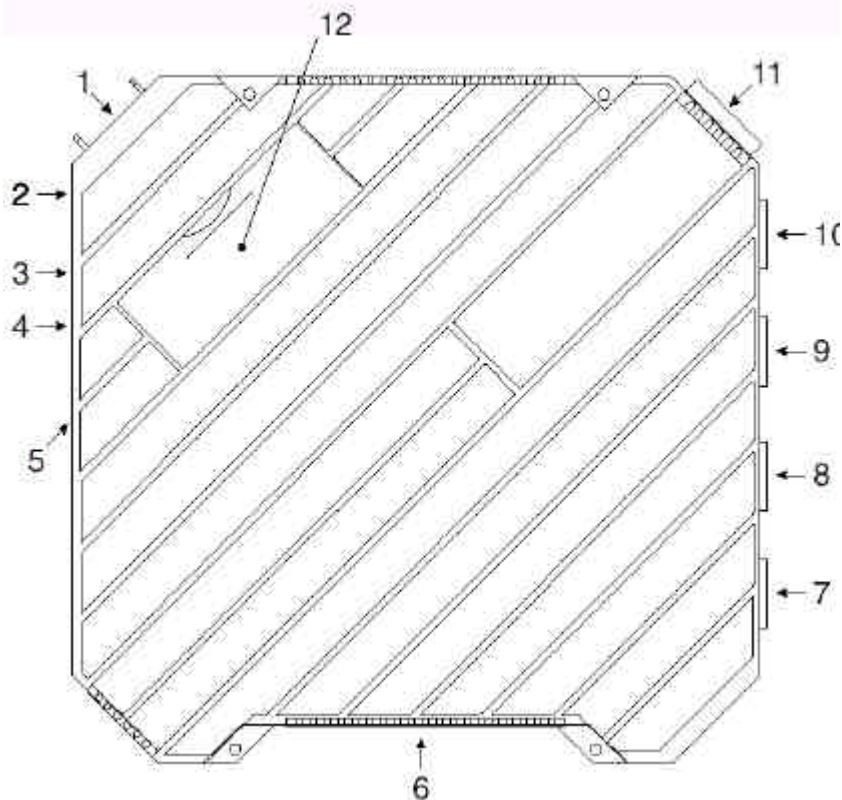
Pin		Description
1	+	+24 VDC
2	-	GND 
3		Ground
4		Ground

5 C220 / 221

5.1 尺寸



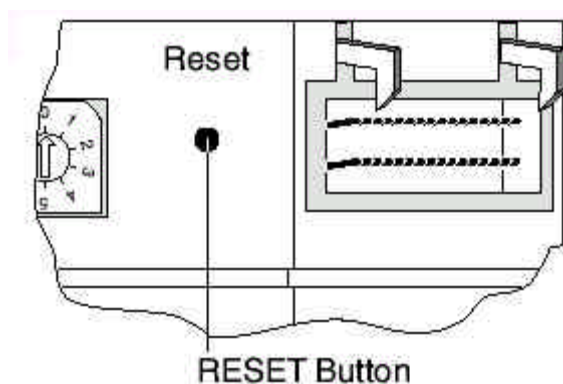
5.2 连接和操作组件



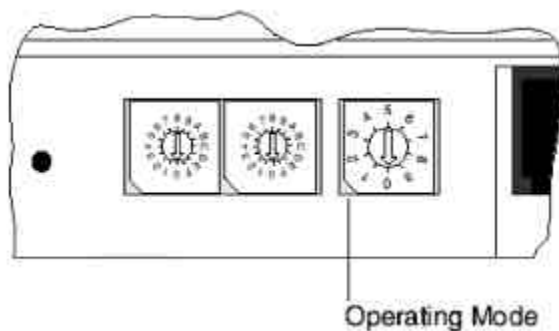
1. 显示模块接口
2. 复位按钮
3. 拨码 — 工作模式
4. 拨码 — CAN 站点
5. 按键模块接口
6. LED 灯
7. IF3: CAN
8. IF2: RS422/RS485

- 9. IF1: RS232
- 10. IF0: RS232 (连 PC)
- 11. 电源接口
- 12. 电池仓盖

5.3 复位按钮



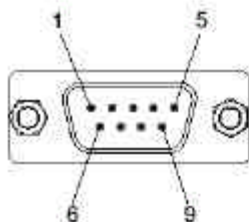
5.4 拨码 — 工作模式



见 “C2xx 与 C300 模式设置”

5.5 RS232 接口 (IF0)

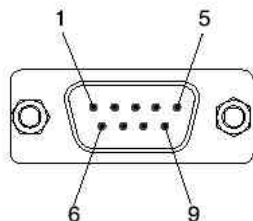
D 型头 (公)



Pin	Description	
1	NC	
2	RxD	Receive Data
3	TxD	Transmit Data
4	+5 V	Power Supply (200 mA)
5	GND	Ground
6	NC	
7	RTS	Request To Send
8	CTS	Clear To Send
9	NC	

5.6 RS232 接口 (IF1)

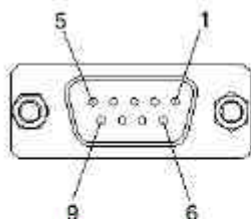
D 型头 (公)



Pin	Description	
1	NC	
2	RxD	Receive Data
3	TxD	Transmit Data
4	12 V	Power Supply for external converter (200 mA)
5	GND	
6	NC	
7	RTS	Request To Send
8	CTS	Clear To Send
9	NC	

5.7 RS422 / RS485 (IF2)

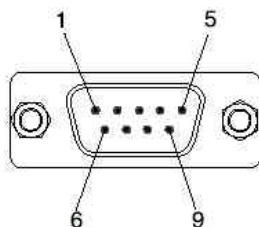
D 型头 (母)



Pin	Description	
	RS422	RS485
1	Shield	
2	TxD	NC
3	RxD	DATA
4	NC	NC
5	GND	
6	+5VDC (200 mA) Galvanic isolation	
7	$\overline{\text{TxD}}$	NC
8	$\overline{\text{RxD}}$	$\overline{\text{DATA}}$
9	NC	NC

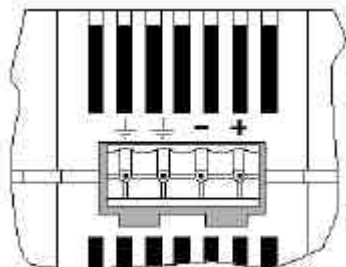
5.8 CAN 接口 (IF3)

D 型头 (公)



Pin	Description	
1	NC	Not used
2	CAN_L	CAN low
3	CAN_GND	CAN ground
4	NC	Not used
5	NC	Not used
6	CAN_GND	CAN ground
7	CAN_H	CAN high
8	NC	Not used
9	NC	Not used

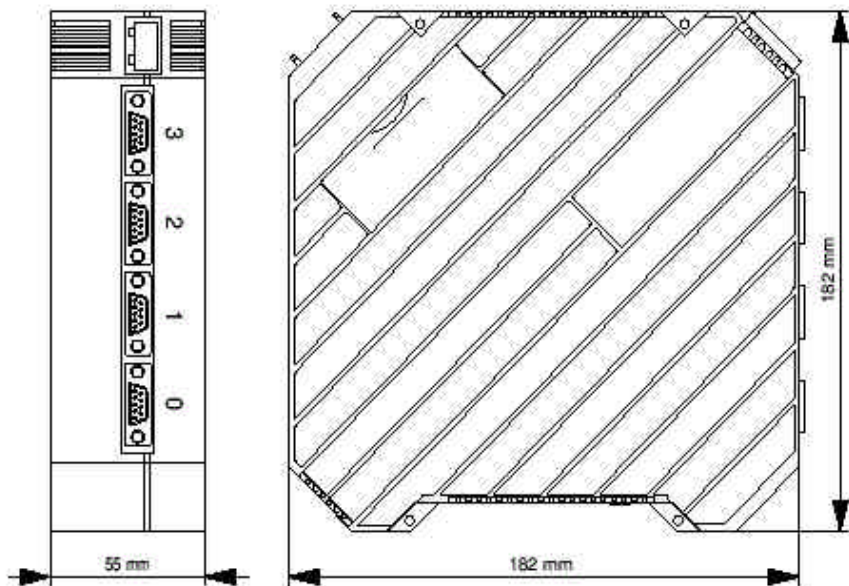
5.9 电源



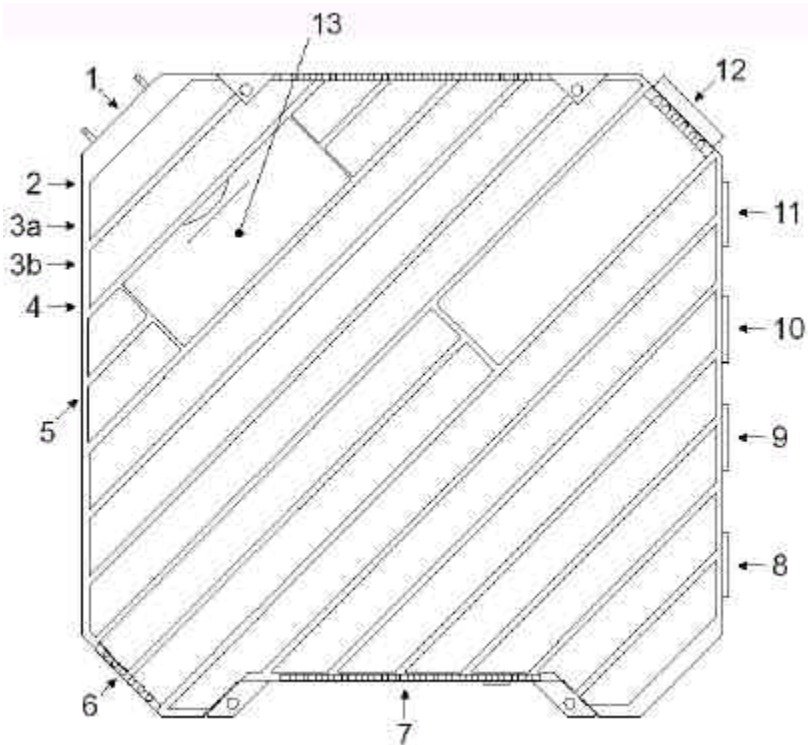
Pin		Description
1	+	+24 VDC
2	-	GND 
3		Ground
4		Ground

6. C300

6.1 尺寸



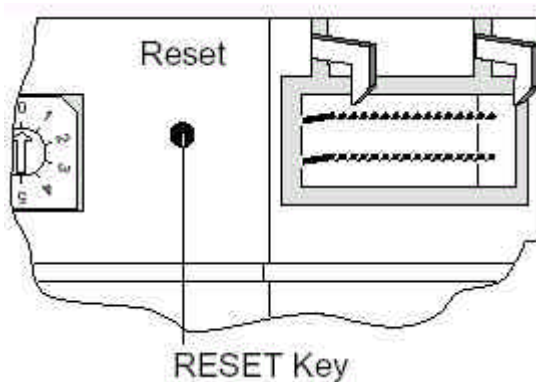
6.2 连接和操作组件



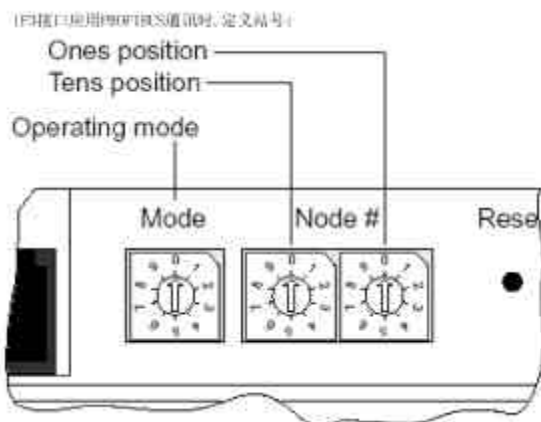
1. 显示模块接口
2. 复位按钮
3. 拨码 — 站点号或特殊功能
4. 拨码 — 工作模式
5. 按键模块接头
6. 后启动选项开关
7. 内存卡插槽
8. IF0: RS232, 可连 Modem
9. IF1: RS232, TTY
10. IF2: RS422, RS485

11. IF3: RS485
12. 电源接口
13. 电池仓盖

6.3 复位按钮

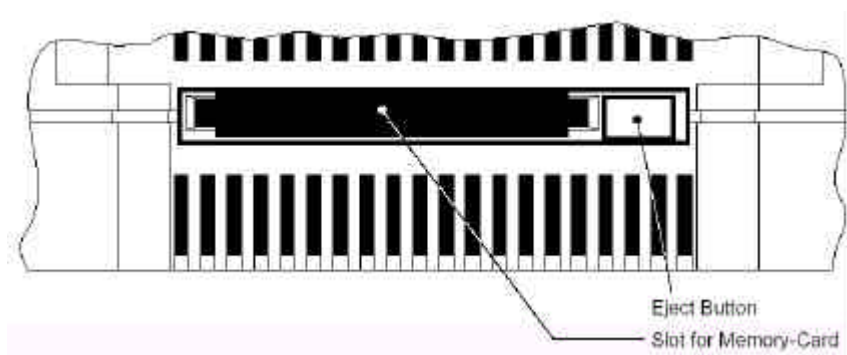


6.4 拨码

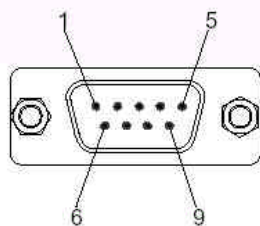


见“C2xx 与 C300 模式设置”

6.5 内存卡插槽

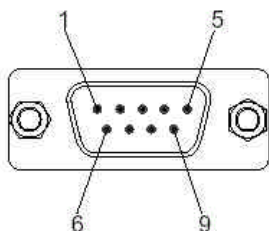


6.6 RS232 接口 (IF0)



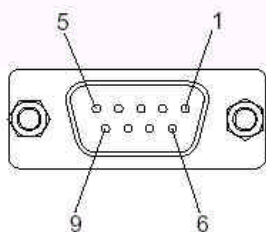
Pin	Description	
1	DCD	Data Carrier Detected
2	RxD	Receive Data
3	TxD	Transmit Data
4	DTR	Data Terminal Ready
5	GND	Ground
6	DSR	Data Set Ready
7	RTS	Request To Send
8	CTS	Clear To Send
9	RI	Ring Indicator

6.7 RS232 / TTY 接口 (IF1)



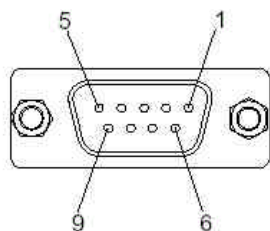
Pin	Description	
	RS232	TTY
1	NC	TxD
2	RxD	20 mA
3	TxD	NC
4	NC	RxD
5	Ground	NC
6	NC	TxD Return $\overline{\text{TxD}}$
7	RTS	20 mA
8	CTS	NC
9	NC	RxD Return $\overline{\text{RxD}}$

6.8 RS422 / RS485 接口 (IF2)



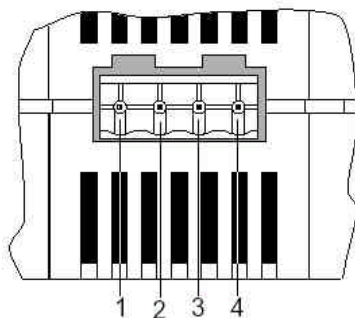
Pin	Description	
1	Shield	Cable shielding
2	NC	
3	DATA	
4	CNTRL	Control line
5	GND	Ground
6	+5V	Potential Isolated Supply (200 mA)
7	NC	
8	$\overline{\text{DATA}}$	
9	$\overline{\text{CNTRL}}$	Control line

6.9 RS485 接口 (IF3)



Description		
Pin	RS422	RS485
1	NC	NC
2	TxD	NC
3	RxD	DATA
4	NC	NC
5	GND	NC
6	+5V _{DC} (200 mA)	NC
7	$\overline{\text{TxD}}$	NC
8	$\overline{\text{RxD}}$	DATA

6.10 电源



Pin		Description
1	+	+24 VDC
2	-	GND 
3		Ground
4		Ground

7. C2xx 与 C300 的模式设置

7.1 C200.C220.C221

No.	PANELWARE Operating System
0	not allowed
1	not allowed
2	not allowed
3	not allowed
4	not allowed
5	Run Mode
6	System Download
7	Teach Mode
8	not allowed
9	not allowed

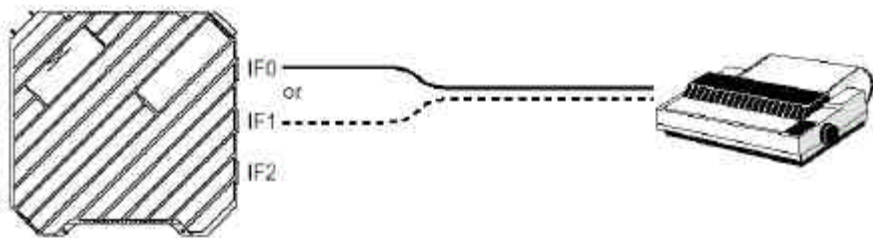
7.2 C300

No.	Funation	Baudrate
0	Run Mode-Profibus	9,600 Baud
1	Run Mode-Profibus	19,200 Baud
2	Run Mode-Profibus	93,750 Baud
3	Run Mode-Profibus	187,500 Baud
4	Run Mode-Profibus	500,000 Baud
5	Run Mode	N/A
6	not allowed	N/A
7	Teach Mode and OS Download	N/A
8	not allowed	N/A
9	not allowed	N/A

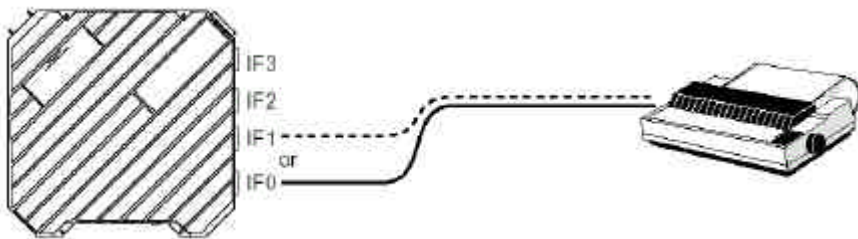
8. 连接打印机

打印机通过 RS232 串行接口（IF0 或 IF1）与控制器连接。

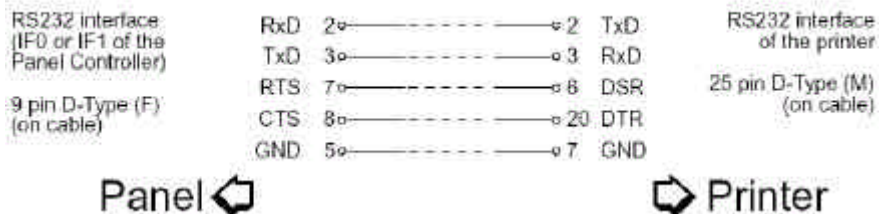
8.1 C200



8.2 C300



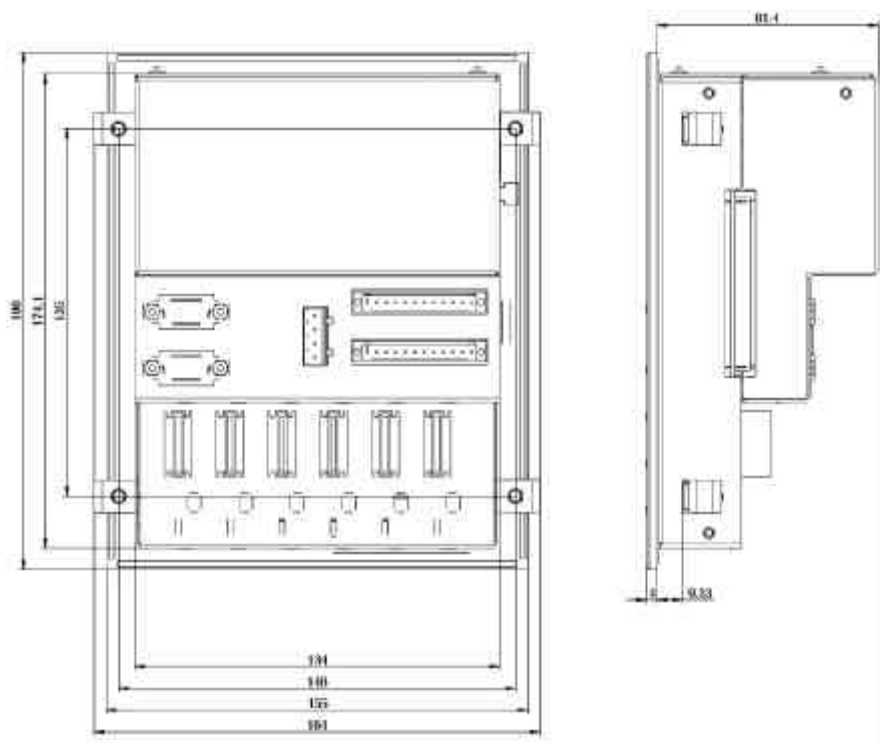
8.3 连接电缆的结构



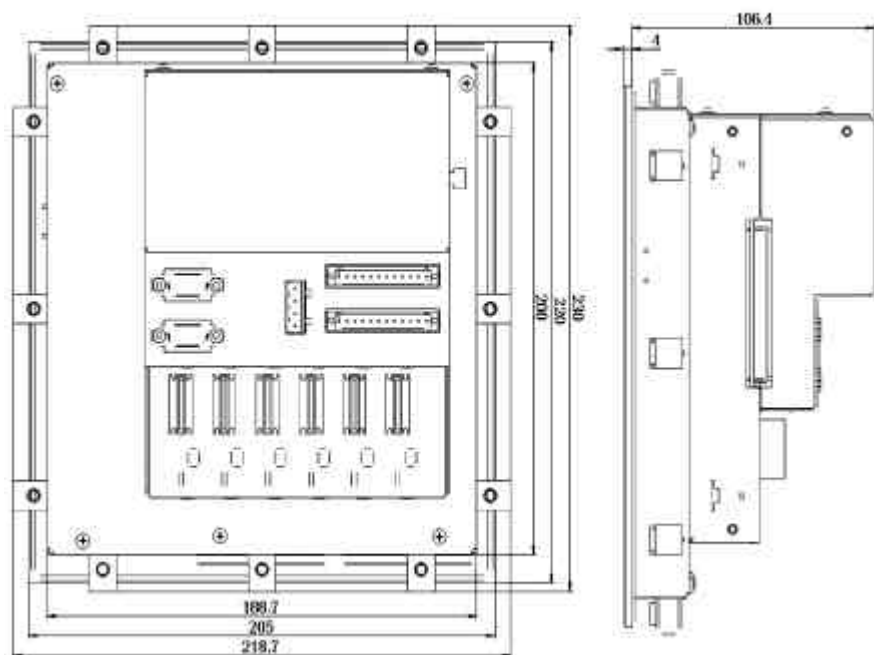
第五章 PowerPanel 概述

1. 尺寸

1.1 PP21

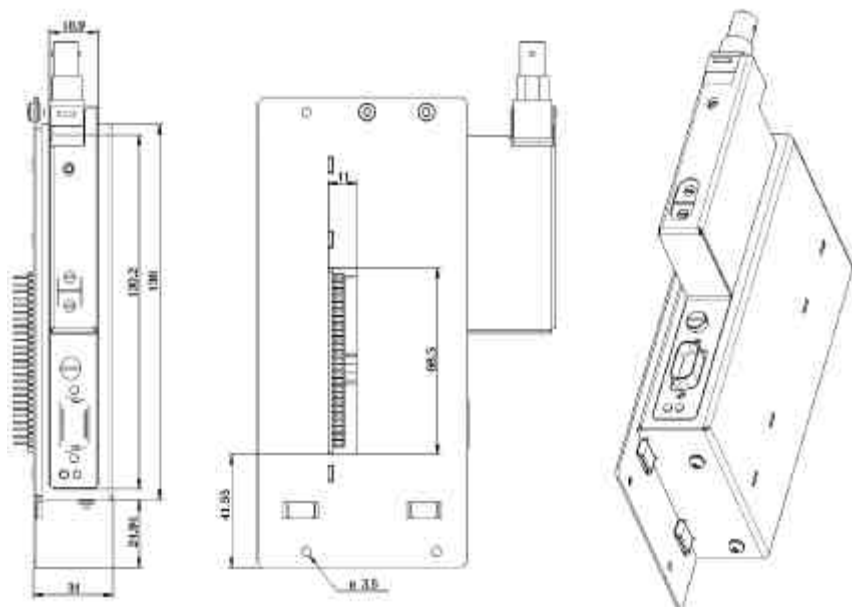


1.2 PP41

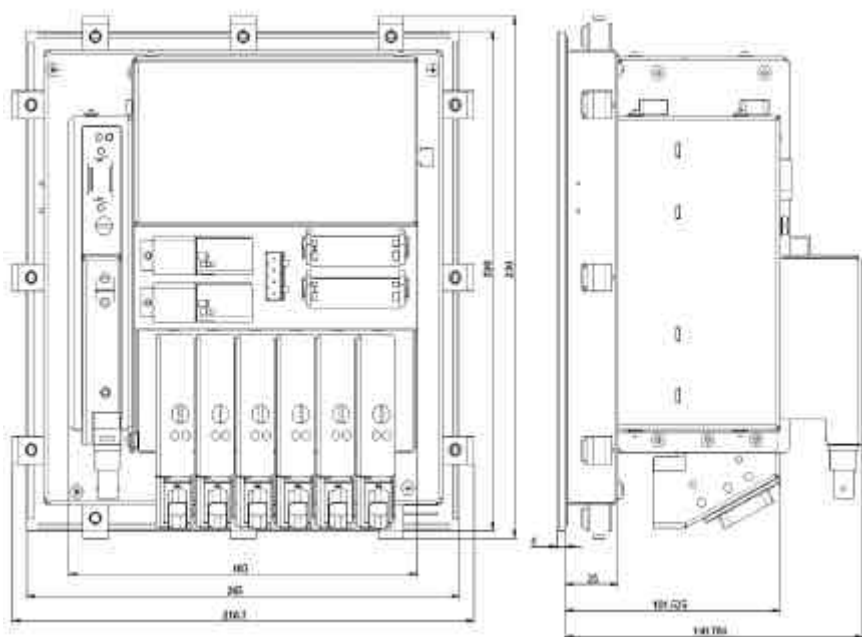


1.3 扩展模块 EX101

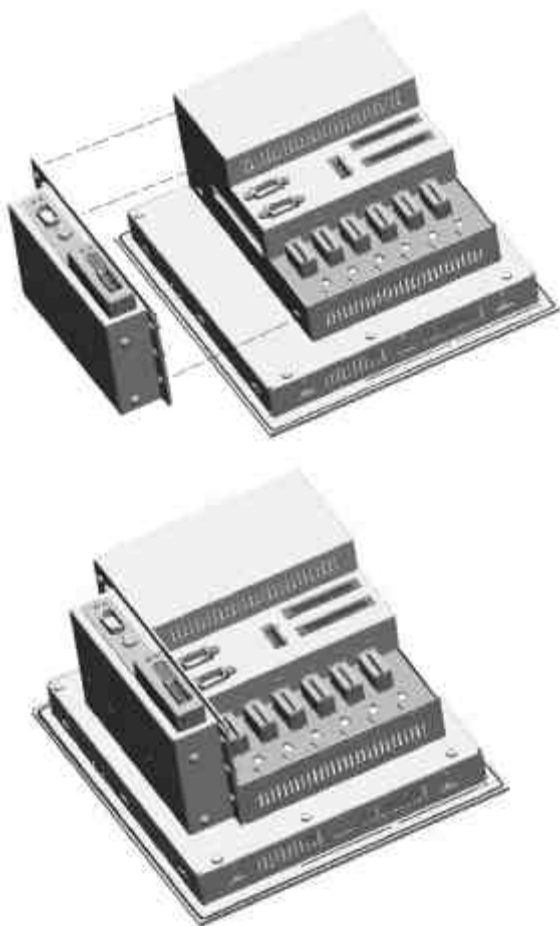
1.3.1 外形



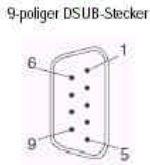
1.3.2 尺寸



1.3.3 安装



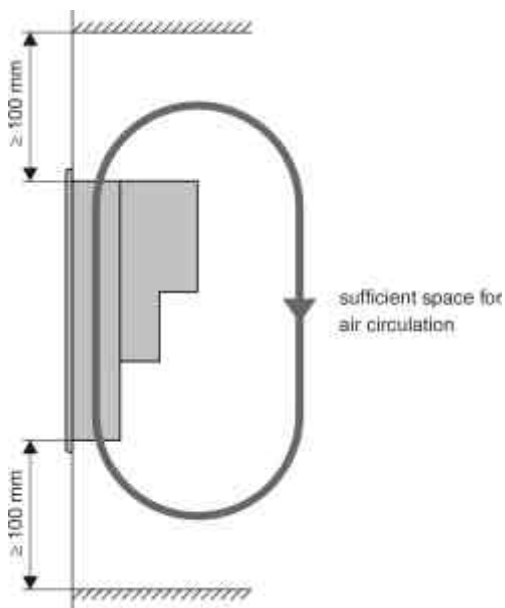
1.4 CAN 接口模块 IF370

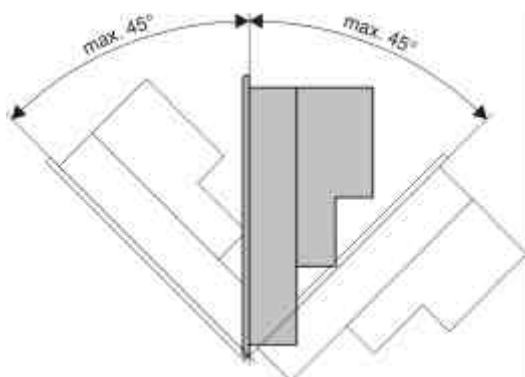
Pinbelegung CAN-Schnittstelle		
Pin	Belegung	
1	NC	
2	CAN_L	
3	CAN_GND	
4	NC	
5	NC	
6	reserviert	
7	CAN_H	
8	NC	
9	NC	

2. 安装规范

安装过程中至少使用四个以上固定夹。

为了保证空气的充分流通，在上方和下方留出各 10 厘米空间。





安装最大倾斜角 $\pm 45^\circ$

3. 设备标签

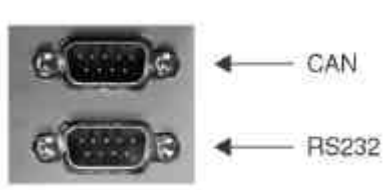


4. 部件说明

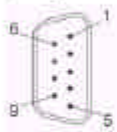
4.1 电源

	Pin	Description ¹⁾
	1	+
	2	+
	3	-
	4	-

4.2 接口



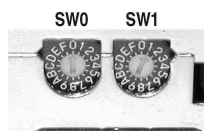
4.2.1 CAN 接口

	CAN	
	Electrically Isolated Assignment according to CAN DS 11Q2-1	
	Pin	Assignment
	1	n.c.
	2	CAN_L
	3	CAN_GND
	4	n.c.
	5	n.c.
	6	reserved
	7	CAN_H
	8	n.c.
	9	n.c.

4.2.2 RS232 接口

 9-pin D-type connector	RS232	
	RS232 Interface not electrically isolated up to 115.2Kbaud	
	Pin	Assignment
	1	n.c.
	2	RXD
	3	TXD
	4	+5 VDC / max. 500 mA
	5	GND
	6	n.c.
	7	RTS
	8	CTS
	9	n.c.

4.2.3 模式开关



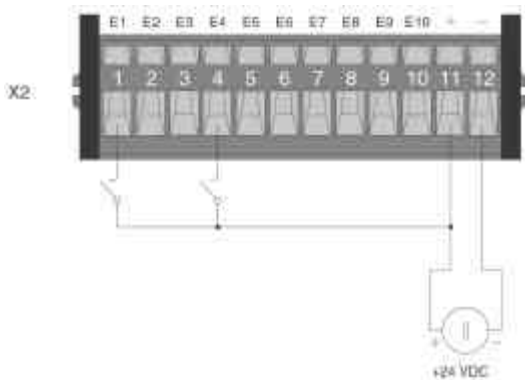
00	操作系统安装
01-FC	应用程序自由使用（例如 CAN 站号）
FD-FE	保留
FF	诊断模式

4.3 数字量输入

4.3.1 端子排

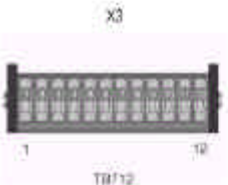
	Connection	Description
	1	Input 1
	2	Input 2
	3	Input 3
	4	Input 4
	5	Input 5
	6	Input 6
	7	Input 7
	8	Input 8
	9	Input 9
	10	Input 10
	11	+24 VDC
	12	GND

4.3.2 连接示例

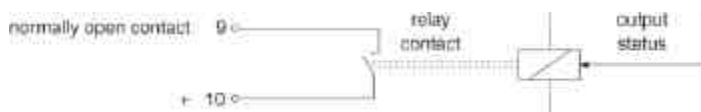


4.4 数字量输出

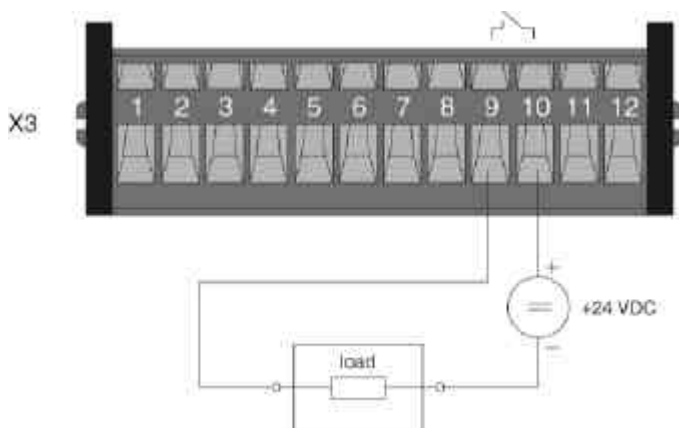
4.4.1 端子排

	Connection	Description
	1	Output 1
	2	Output 2
	3	Output 3
	4	Output 4
	5	Output 5
	6	Output 6
	7	Output 7
	8	Output 8
	9	electrically isolated relay contact
	10	electrically isolated relay contact
	11	+24 VDC, outputs 1-8
	12	GRD, outputs 1-8

4.4.2 电隔离的继电器触点输出电路

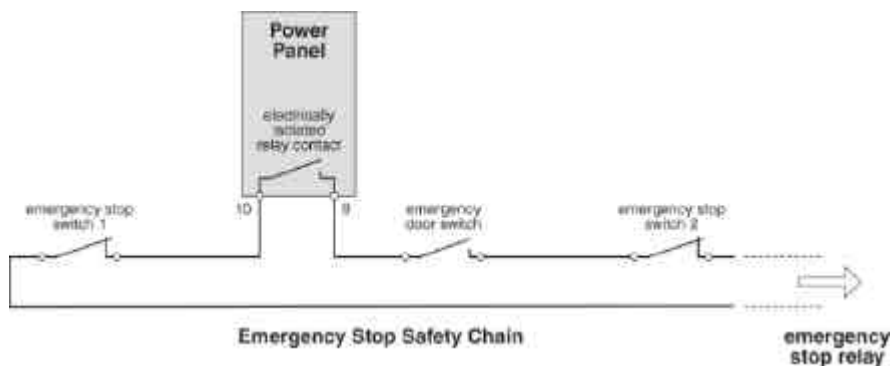


4.4.3 输出 1—8 连接示例

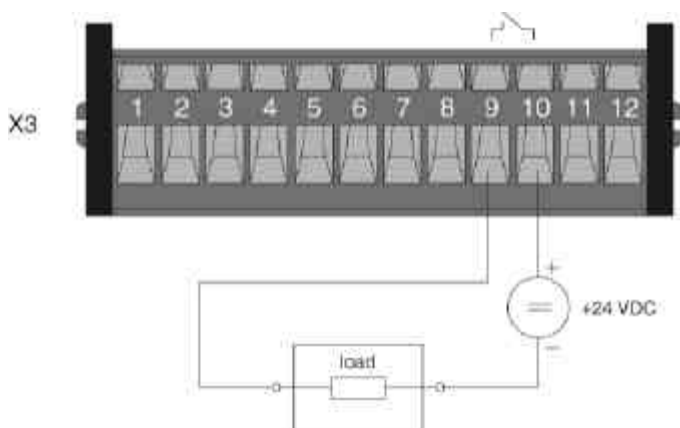


4.4.4 电隔离继电器触点连接

示例一：急停安全线路



示例二：负载切换



5 更换电池

如果在关掉 PCC 后更换电池，储存在 RAM 中的数据将丢失！

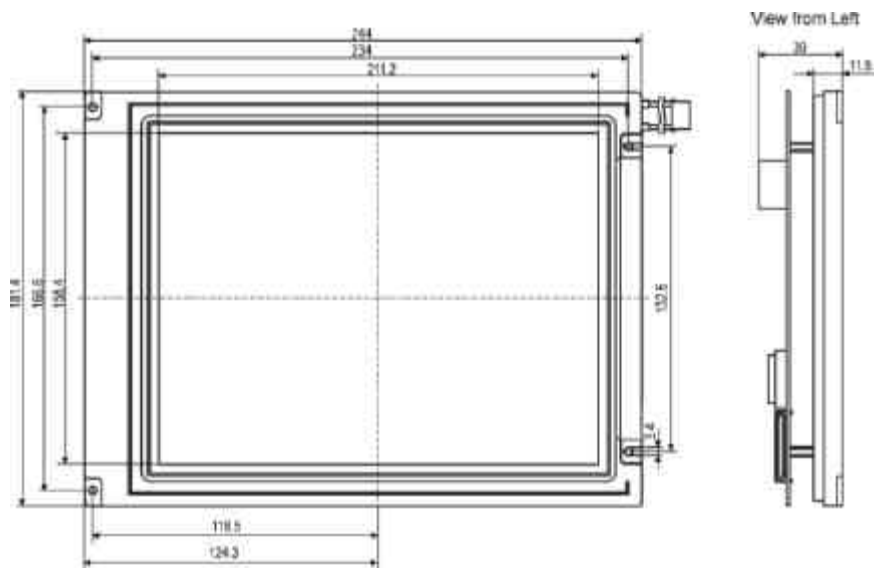
- 1) 轻触安装导轨或接地端(除了电源!) ,确保将身体上静电充分释放。
- 2) 用螺丝刀开启电池仓盖。
- 3) 轻拉电池起出条，从仓中取出电池。（请勿使用钳子或未绝缘的工具——有短路的危险）注意不要捏住电池的两端。也可以使用绝缘工具取出电池。
- 4) 按正确的极性方向放入新电池。做法是：提起电池起出条，将电池“+”极向上放入电池仓。为了以后能取出电池，电池起出条必须从电池上方穿出。
- 5) 然后将电池起出条从电池上方绕过，再插入电池下方，确保其未伸出电池仓外。

锂电池是一种有毒的废料！用后的电池必须正确丢弃。

第六章 Provit 2000 显示单元

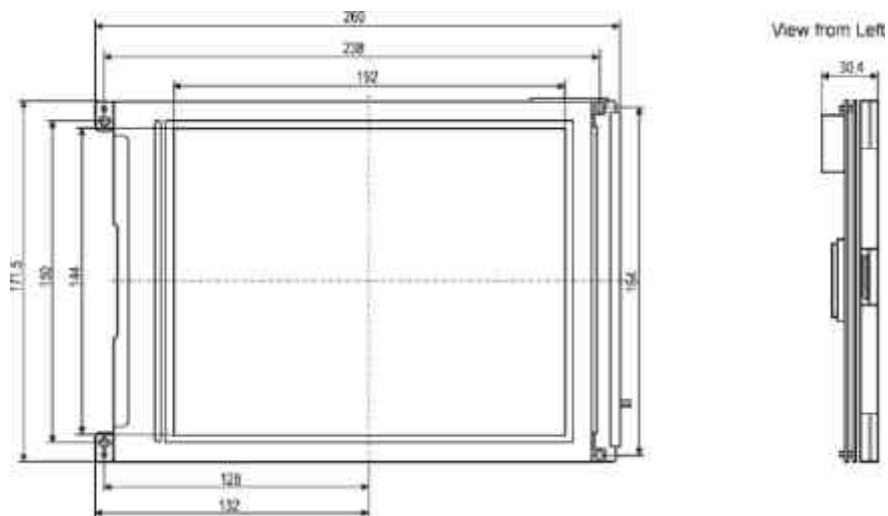
1. 5D2000.03

尺寸(10 吋)

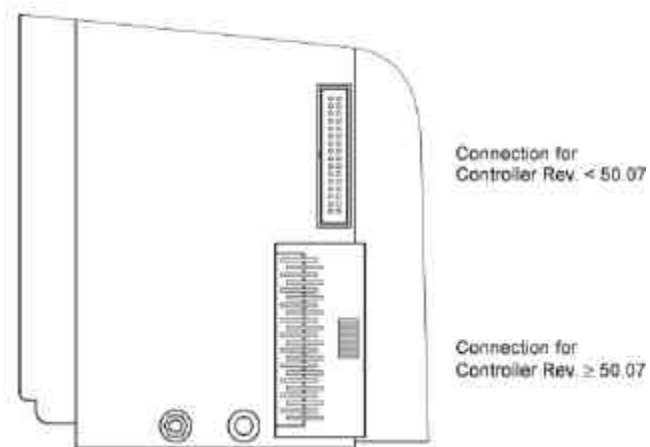


2. 5D2000.04

尺寸(9.4 吋)

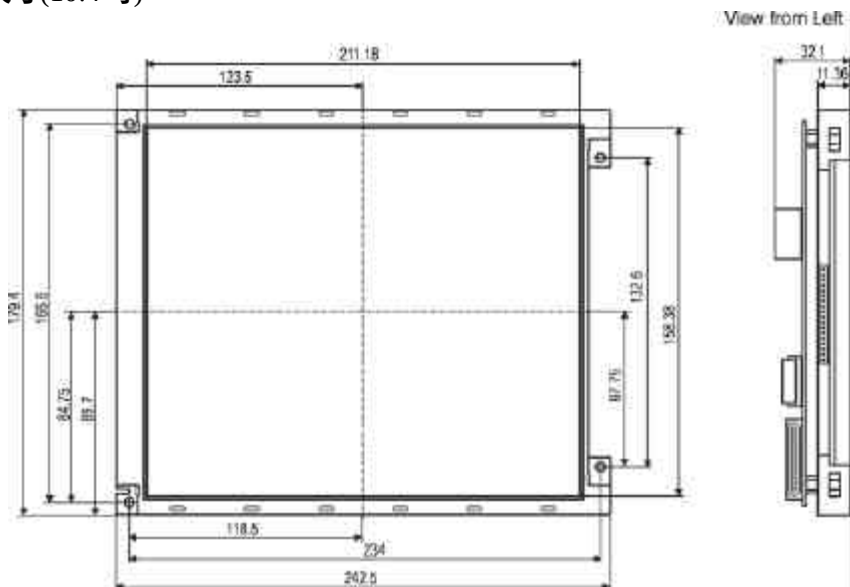


连接控制器的接口

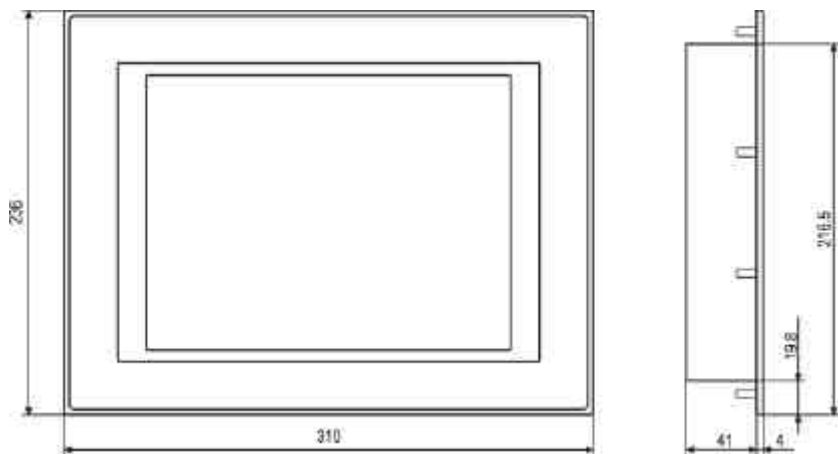


3. 5D2000.10

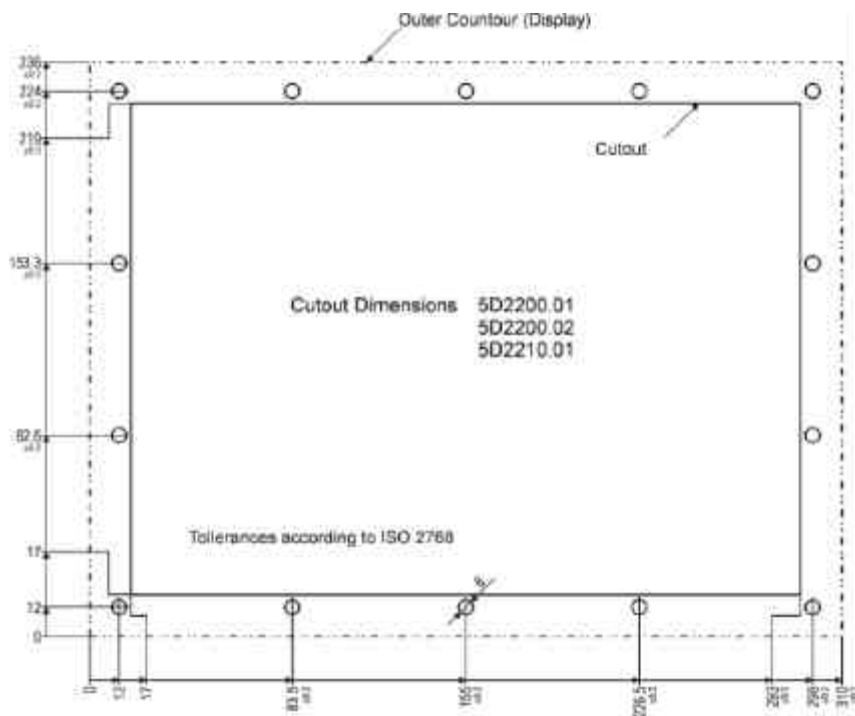
尺寸(10.4 吋)



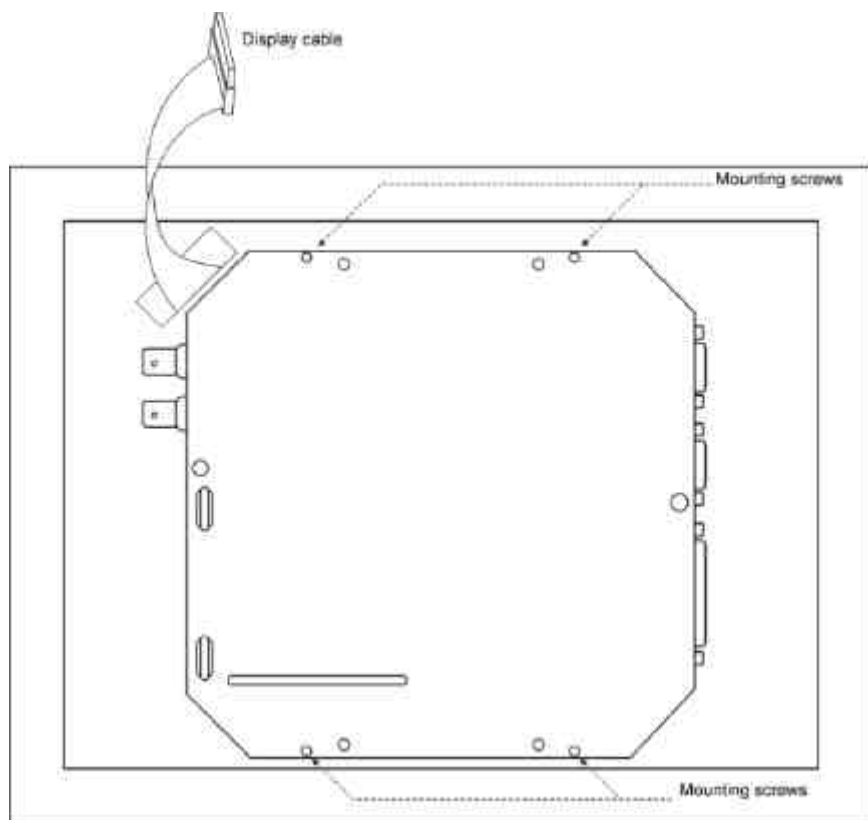
4. 5D2210.01, 5D2200.0x



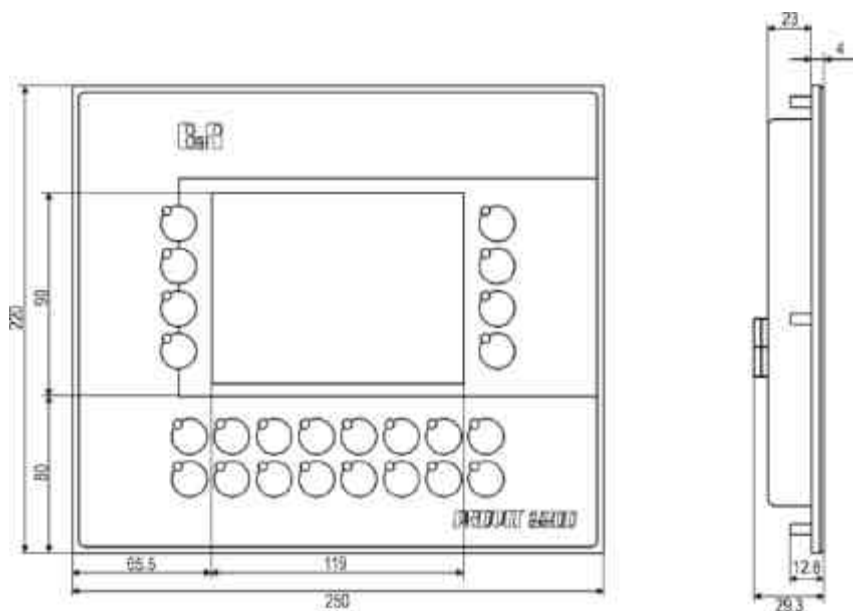
安装尺寸



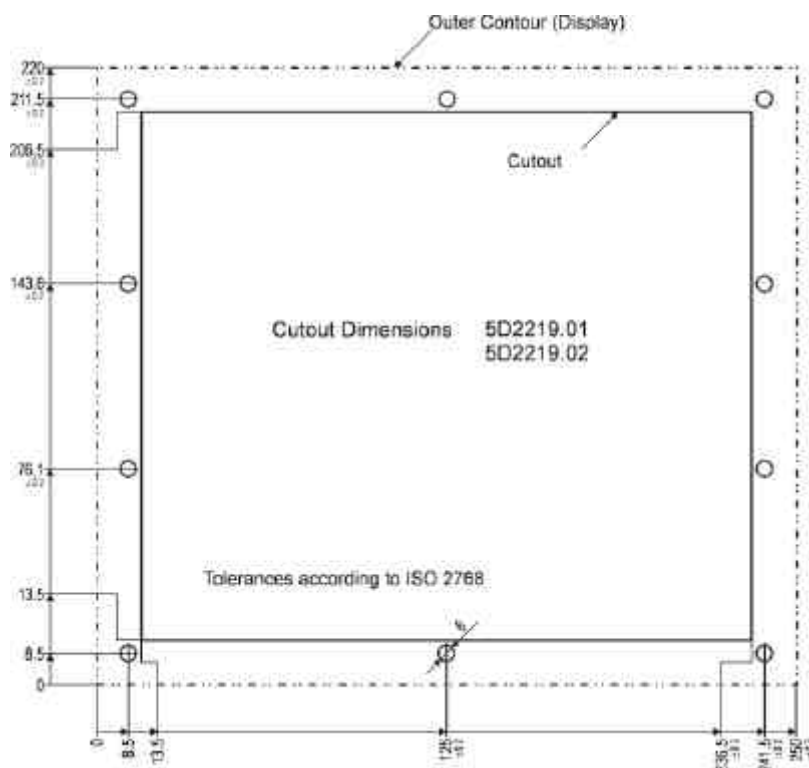
控制器安装



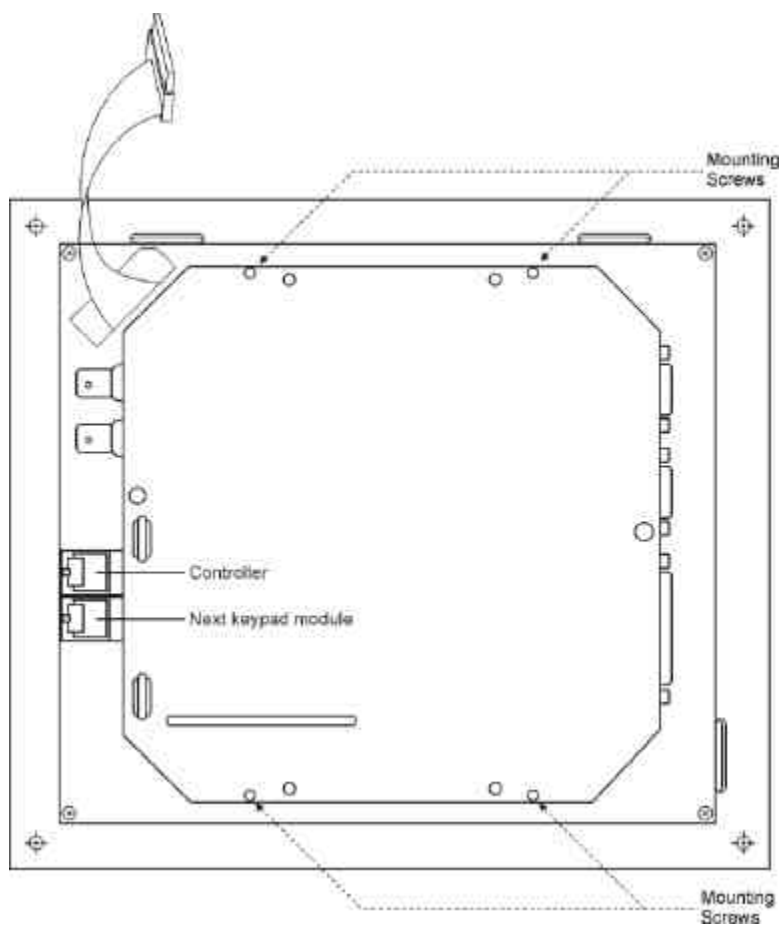
5. 5D2219.01- 02



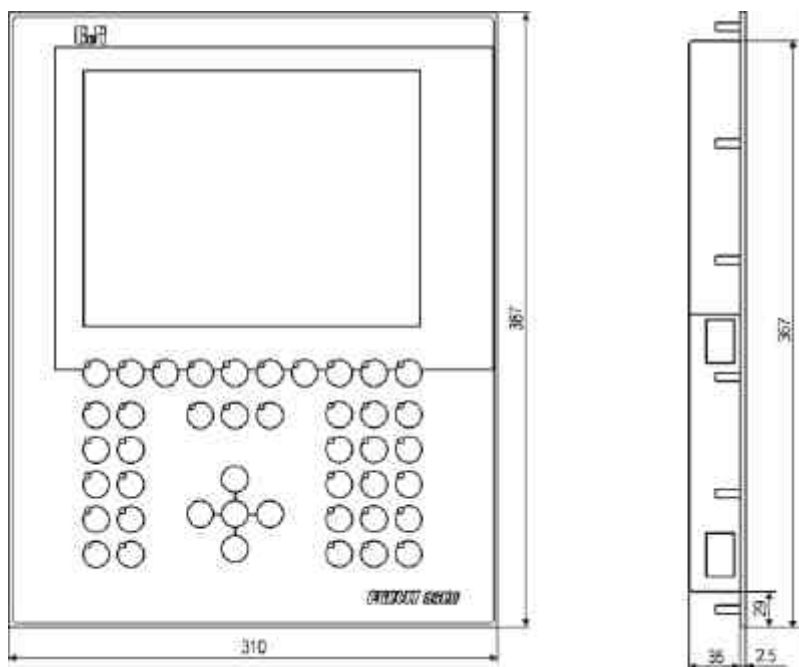
安装尺寸



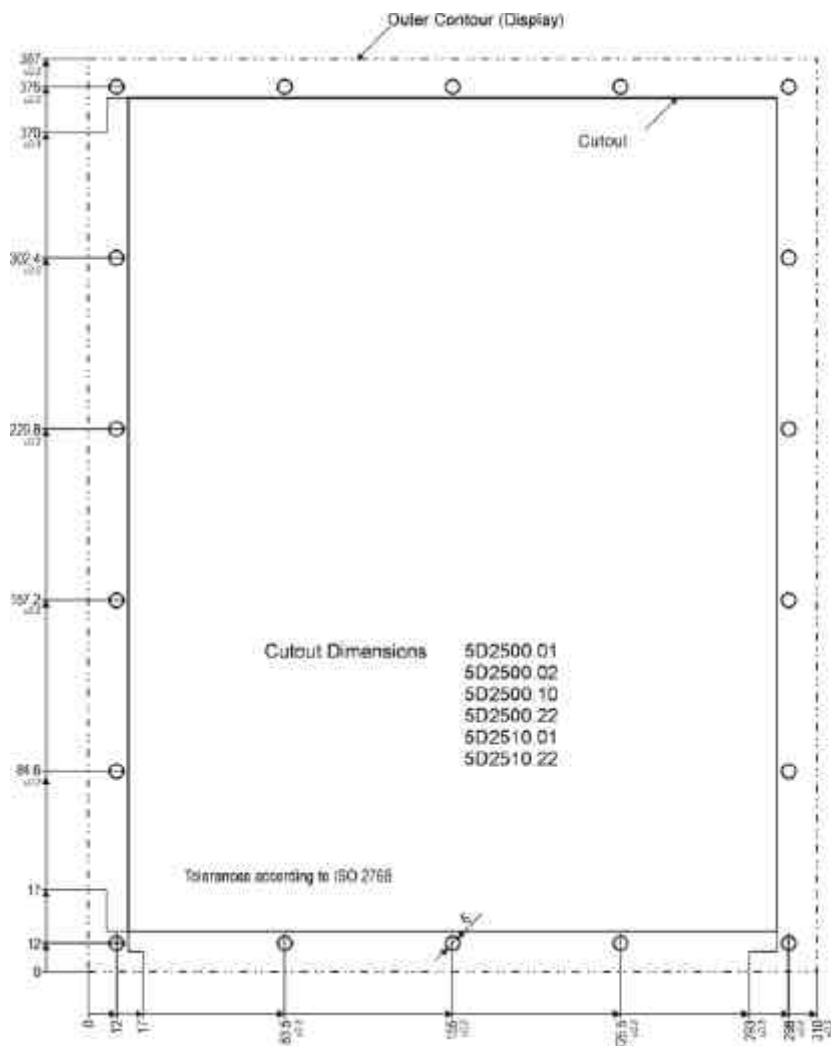
控制器的安装



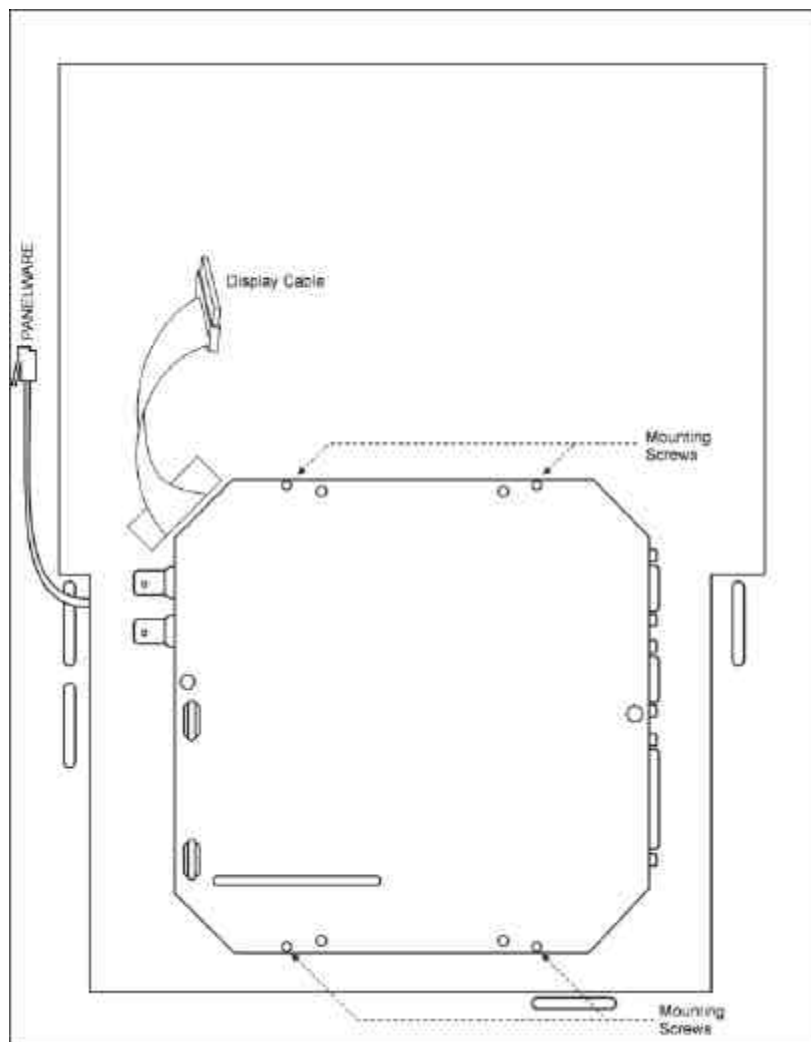
6. 5D2500.xx , 5D2510.xx

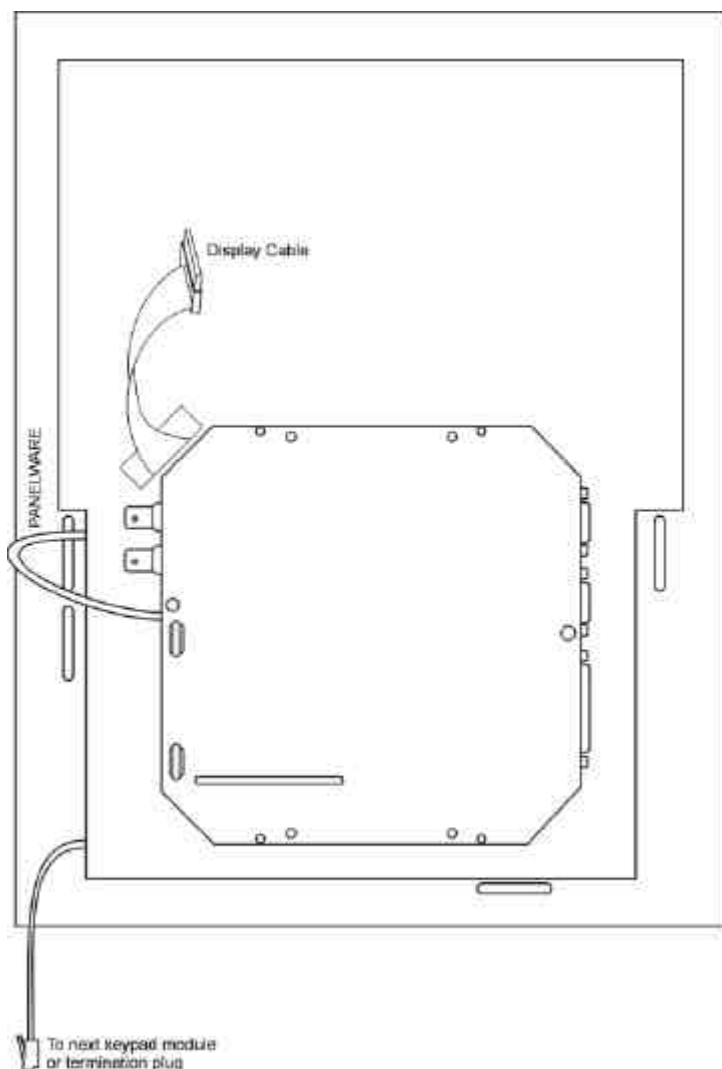


安装尺寸

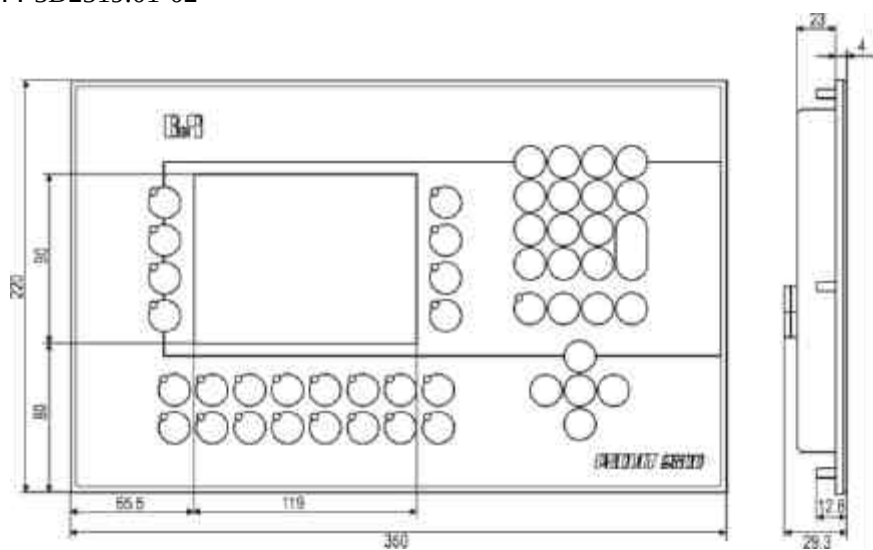


控制器安装

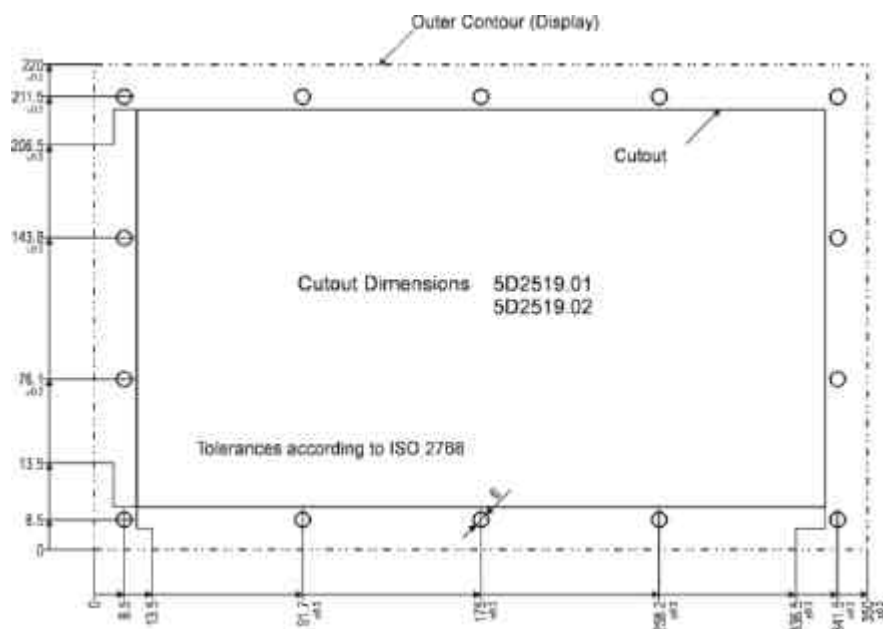




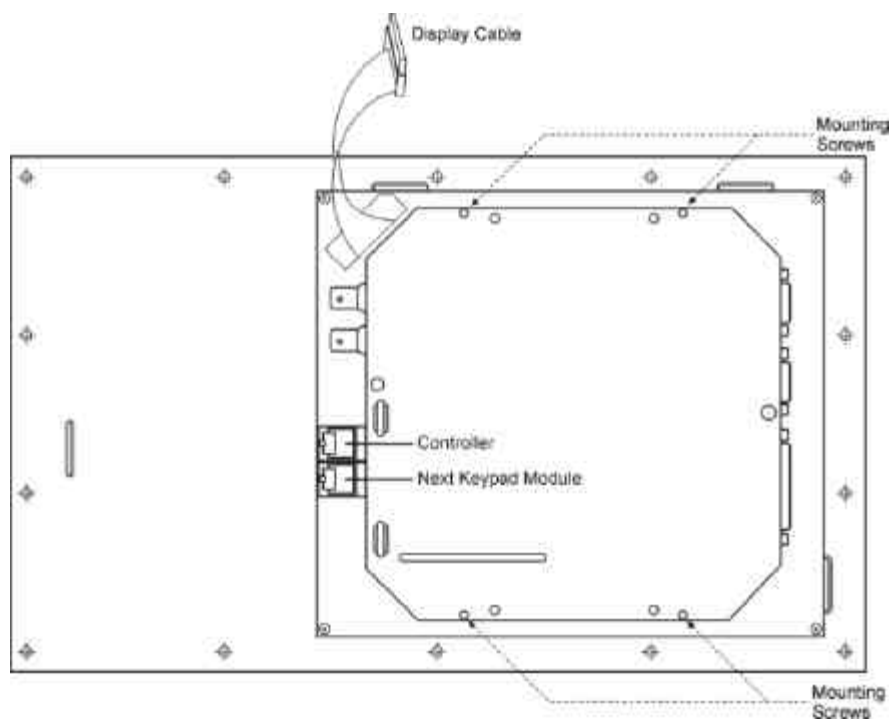
7. 5D2519.01-02



安装尺寸



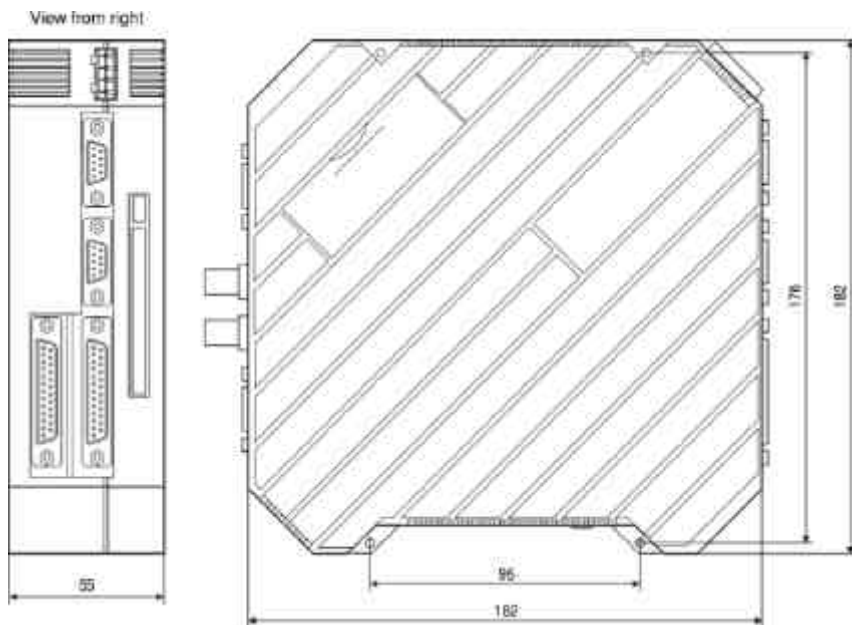
控制器安装



第七章 Provit 2000 控制器单元

1. IPC2000

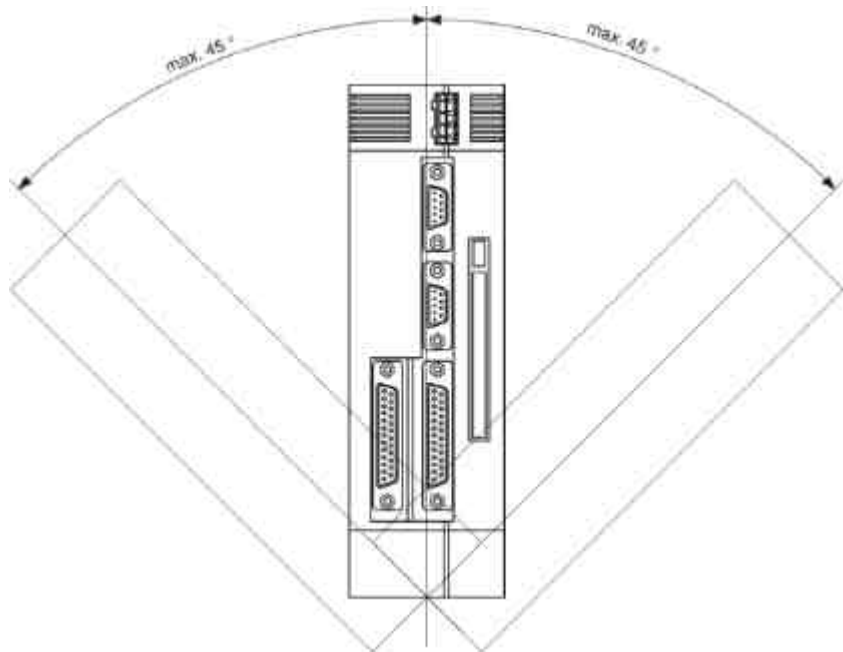
1.1 尺寸



1.2 安装

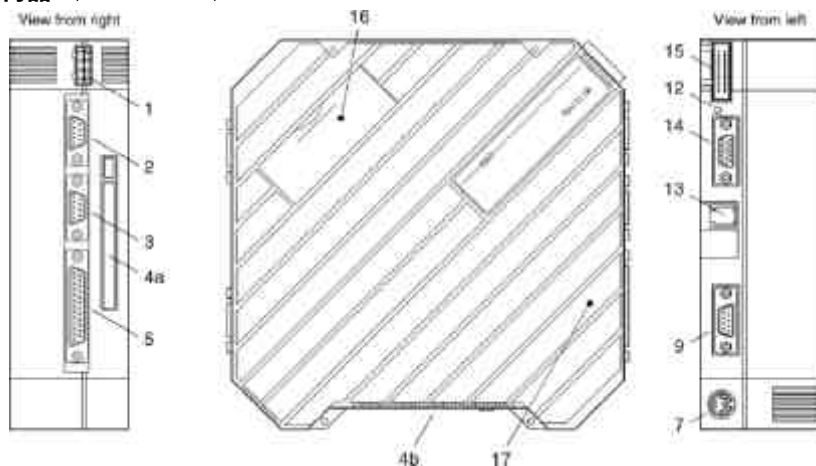
带有风扇的控制器安装时必须保持风扇向上。

控制器安装时最大倾斜角为 $\pm 45^{\circ}$ 。



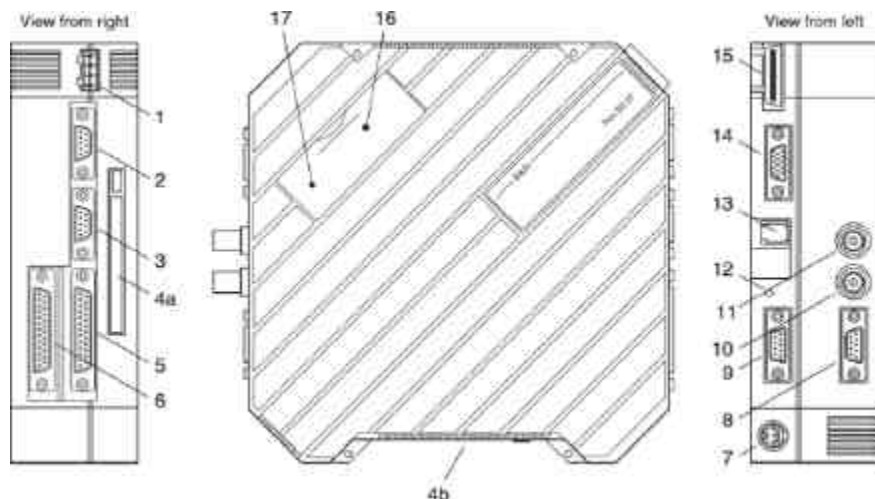
1.3 部件一览

控制器 (Rev.<50.07)



1. 电源接口
2. COM1 RS232
3. COM2 RS232 / TTY
- 4a. PC 卡接口 1
- 4b. PC 卡接口 2
5. 外置磁盘驱动器或并行接口 LPT1
7. AT 增强型键盘接口
9. COM3 RS485 / TTY / CAN
12. 复位按钮
13. 按键模块接口
14. VGA 显示器接口
15. 显示单元接口
16. 电池仓
17. Interact 硬件狗

控制器 (Rev.50.07)



1. 电源接口
- 2.COM1 RS232
- 3.COM2 RS232 / TTY
- 4a.PC 卡接口 1
- 4b.PC 卡接口 2
- 5.外置磁盘驱动器
- 6.并行接口 LPT1
- 7.AT 增强型键盘接口
- 8.COM4 RS232 / RS422
- 9.COM3 RS485 / TTY / CAN
- 10.ETHERNET
11. Arcnet
- 12.复位按钮
- 13.按键模块接口
14. VGA 显示器接口

15.显示单元接口

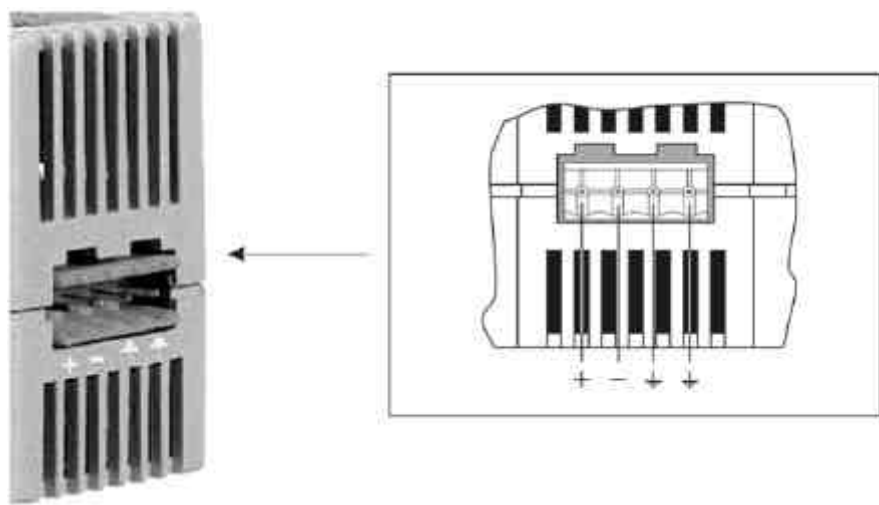
16.电池仓

17.Interact 硬件狗

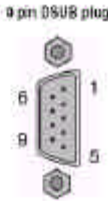
1.4 部件说明

1.4.1 电源

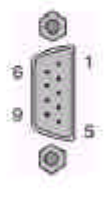
接地电缆必须尽可能的短。如果在控制柜中安装，电缆请勿超过 15 厘米。



1.4.2 COM1 RS232

COM1		
RS232 interface Not electrically isolated up to 115 kBaud		
Pin	RS232	
1	DCD	
2	RXD	
3	TXD	
4	DTR	
5	GND	
6	DSR	
7	RTS	
8	CTS	
9	RI	

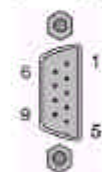
1.4.3 COM2 RS232 / TTY

COM2		
RS232/TTY interface Not electrically isolated RS232: up to 115 kBaud TTY: up to 115 kBaud		
Pin	RS232	TTY
1		TXD
2	RXD	
3	TXD	
4	DTR	
5	GND	TXD Rst
6		RXD
7	RTS	
8	CTS	
9		RXD Rst

1.4.4 COM3 RS485 / TTY / CAN

COM3			
RS485 / TTY / CAN Interface Electrically isolated from the system ground No isolation between interface types 16 Bytes FIFO RS485: up to 115 kBaud TTY: up to 115 kBaud			
Pin	RS485	TTY	CAN
1		TXD	
2			CAN L
3			GND
4		RXD	
5	DATA		
6	GND	TXD Ret	
7			CAN H
8	DATA		
9		RXD Ret	

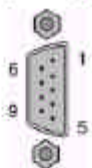
9 pin DSUB plug



1.4.5 COM4 RS232 / RS422

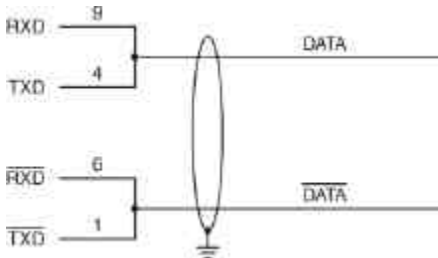
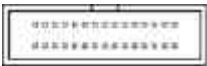
COM4		
RS232/RS422 interface Electrically isolated 16 Bytes FIFO RS232: up to 115 kBaud RS422: up to 115 kBaud		
Pin	RS232	RS422
1		Trd
2	RXD	
3	TXD	
4		TXD
5	GND	GND
6		25D
7	RTS	
8	CTS	
9		RXD

9 pin DSUB plug



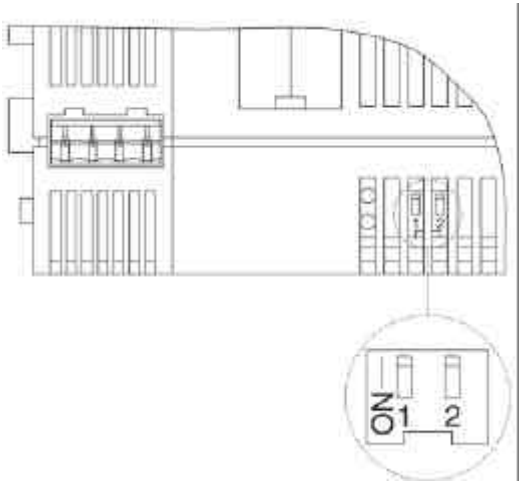
接线

1.4.6 显示单元接口



Rev. 2.50.07

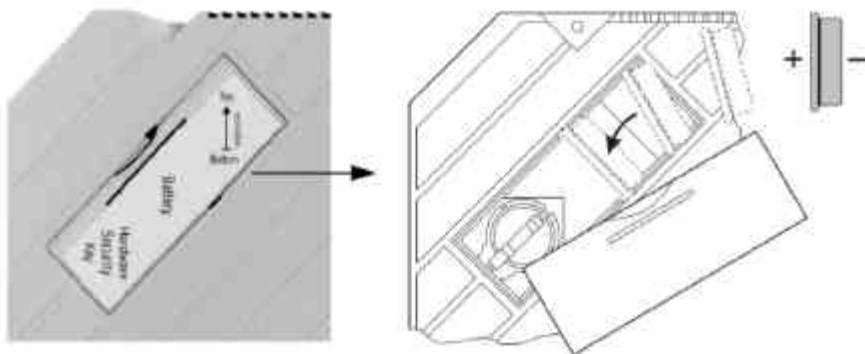
1.4.7 状态灯



L1: 电源供电 OK

L2: 温度过高（控制器 5C2000.03, 5C2000.05 和 5C2000.07）

1.4.8 电池

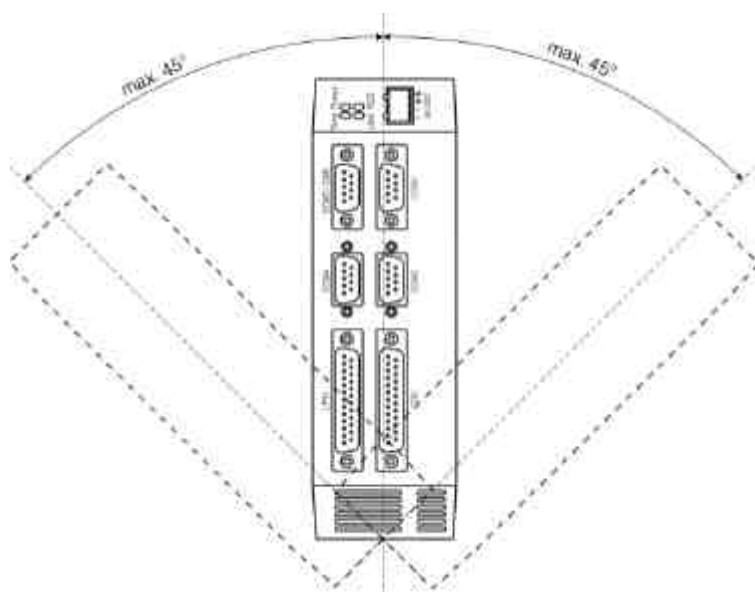


电池数据：3V 锂电池/950mAh

根据 CE 规定，必须在控制器掉电的情况下，更换电池。电池更换时，CMOS 中的数据和时间全部丢失。

2. IPC2001

2.1 尺寸

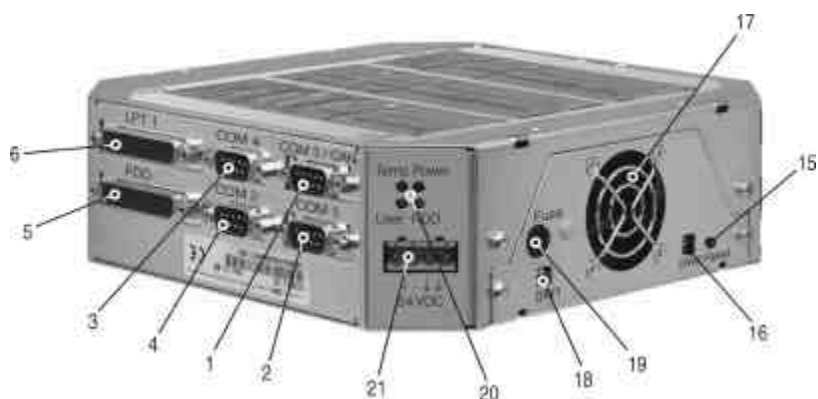
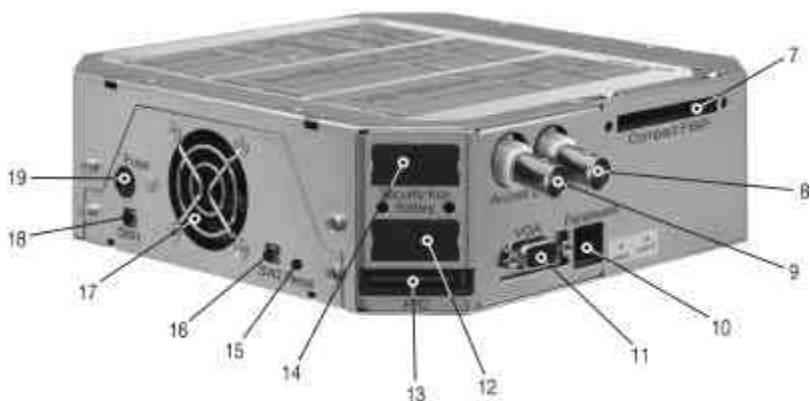


2.3 部件一览





- 1.COM3 CAN 接口
- 2.COM1 接口
- 3.COM4 接口
- 4.COM2 接口
- 5.软驱接口
- 6.标准 LPT1 接口（双向）
- 7.PC 卡 / PCMCIA I II III
- 8.ISA 扩展
- 9.PS / 2 外置键盘
- 10.Compact Flash 槽
- 11.Ethernet 接口
- 12.Arcnet 接口
- 13.按键模块接口
- 14.外接 VGA 显示器



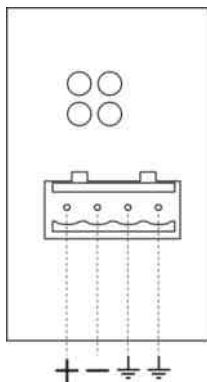
- 1.COM3 CAN 接口
- 2.COM1 接口
- 3*.COM4 接口
- 4.COM2 接口
- 5.软驱接口
- 6.标准 CPT1 接口（双向）
- 7*.Compact Flash 槽
- 8*.Ethernet

- 9*.Arcnet
- 10.按键模块接口
- 11.外置 VGA 显示器
- 12.CMOS 电池
- 13.平板显示屏接头
- 14.硬件安全锁
- 15.复位按钮
- 16.DIP 开关 2
- 17*.风扇
- 18.DIP 开关 1
- 19.保险丝
- 20.LED 状态灯
- 21.电源
- *.根据控制器类型

2.4 部件说明

2.4.1 电源

接地电缆必须尽可能的短。如果在控制柜中安装，电缆请勿超过 15 厘米



2.4.2 COM1 RS232

COM1		
RS232 interface Not electrically isolated Up to 115 Kbaud		
Pin	RS232	
1	DCD	
2	RXD	
3	TXD	
4	DTR	
5	GND	
6	DSR	
7	RTS	
8	CTS	
9	RI	

2.4.3 COM2 RS232 / TTY

COM2			
RS232/TTY Interface Not electrically isolated RS232: up to 115 kBaud TTY: up to 115 kBaud			
Pin	RS232	TTY	
1		TXD	
2	RXD		
3	TXD		
4	DTR		
5	GND	TXD Ret.	
6		RXD	
7	RTS		
8	CTS		
9		RXD Ret.	

9 pin DSUB plug

2.4.4 COM3 RS485/TTY / CAN

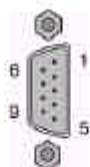
COM3			
RS485 / TTY / CAN Interface Electrically isolated from the system ground No isolation between interface types 16 Bytes FIFO RS485: up to 115 kBaud TTY: up to 115 kBaud			
Pin	RS485	TTY	CAN
1		TXD	
2			CAN L
3			GND
4		RXD	
5	DATA		
6	GND	TXD Ret.	
7			CAN H
8	DATA		
9		RXD Ret.	

9 pin DSUB plug

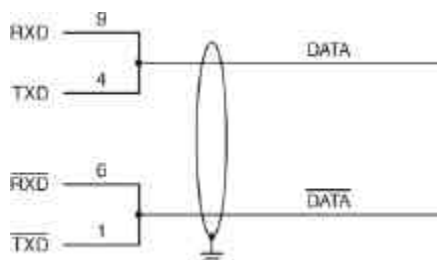
2.4.5 COM4 RS232 / RS422

COM4		
RS232/RS422 interface electrically isolated 16 Byte FIFO RS232: up to 115 kBaud RS422: up to 19200 Baud		
Pin	RS232	RS422
1		TXD
2	RXD	
3	TXD	
4		TXD
5	GND	GND
6		RXD
7	RTS	
8	CTS	
9		RXD

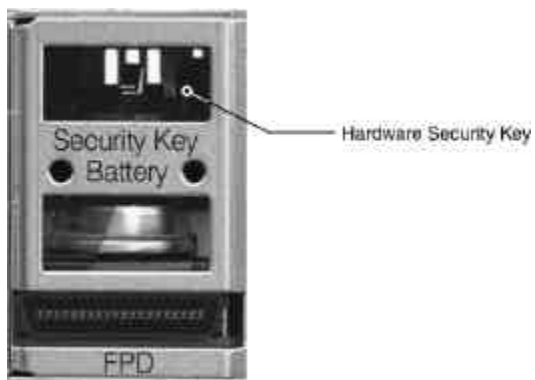
9 pin DSUB plug



接线



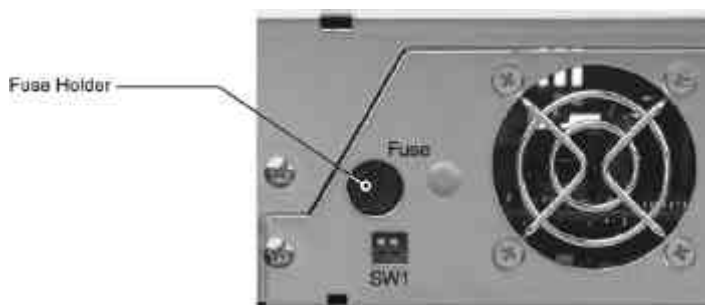
2.4.6 显示单元连接



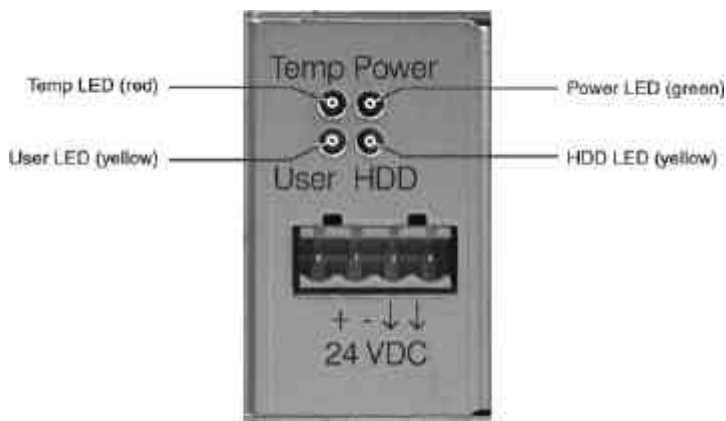
2.4.7 复位按钮



2.4.8 保险丝

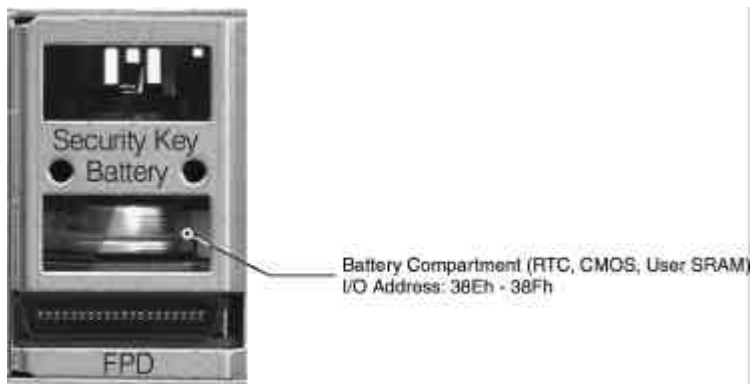


2.4.9 状态灯



灯	颜色	说明
PowerLED	绿	供电时灯亮
HDD LED	黄	硬盘读写时灯亮
UserLED	黄	由应用程序控制，I/O 地址： 388h
TempLED	红	注意：带有风扇的控制器才有。 当 IPC2001 温度超过 48℃时风 扇开始运行，刚达到 56℃时风 扇达到最大转速，到温度低于 44℃的时候，风扇停止工作。

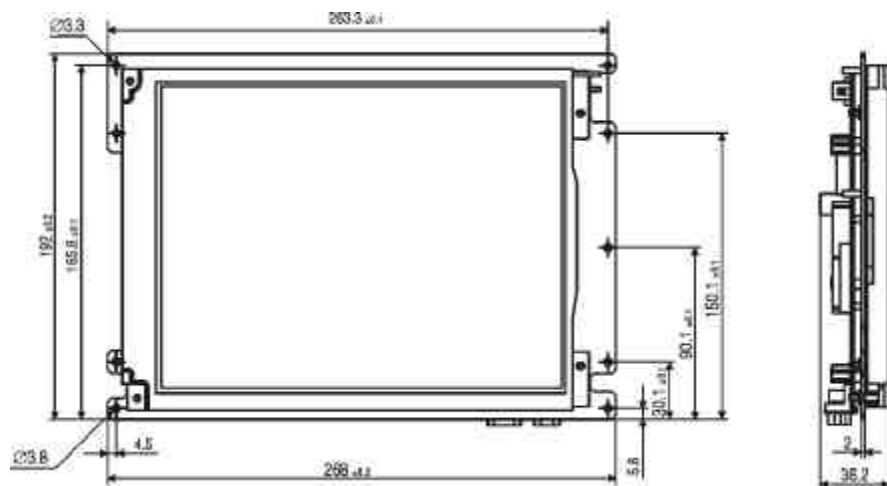
2.4.10 电池



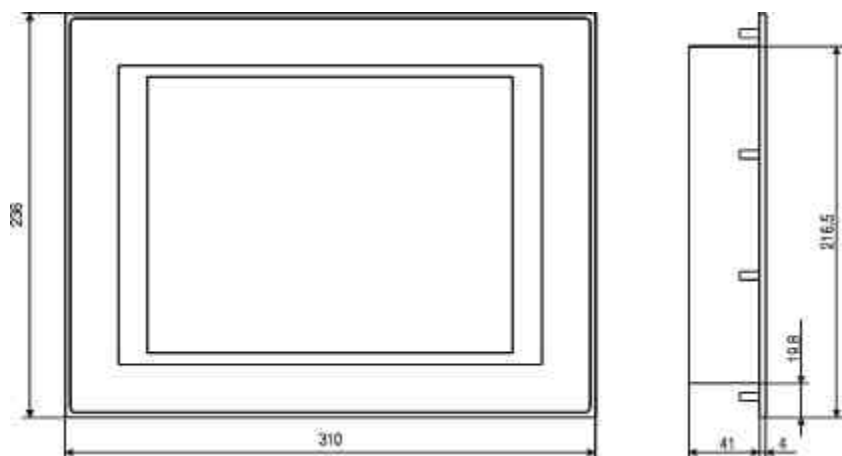
根据 CE 规定，必须在控制器掉电的情况下，更换电池。电池更换时，CMOS 中的数据和时间全部丢失。

第八章 PROVIT5000 显示单元

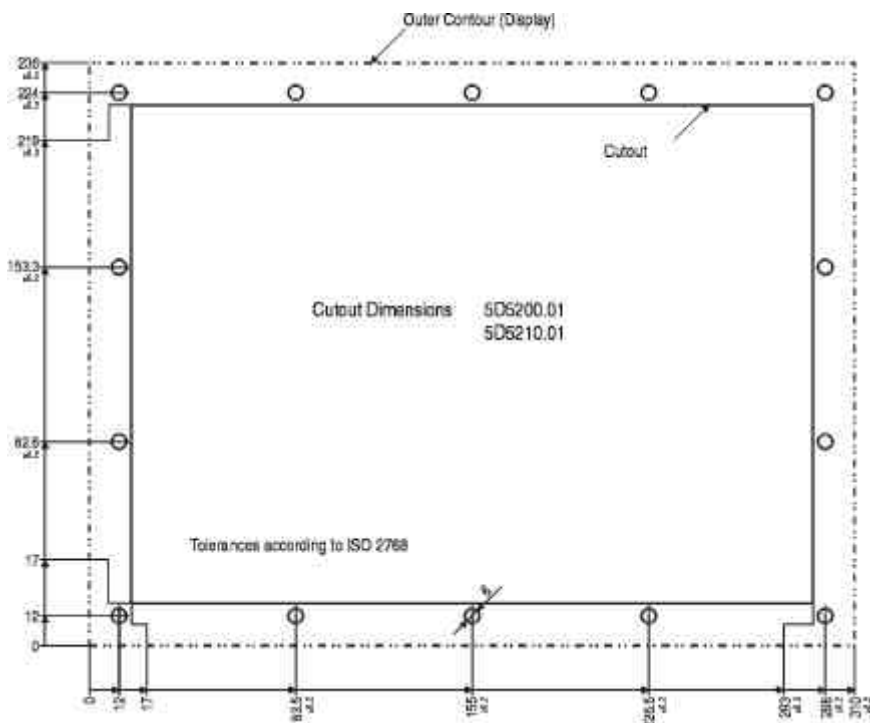
1. 5D5000.03



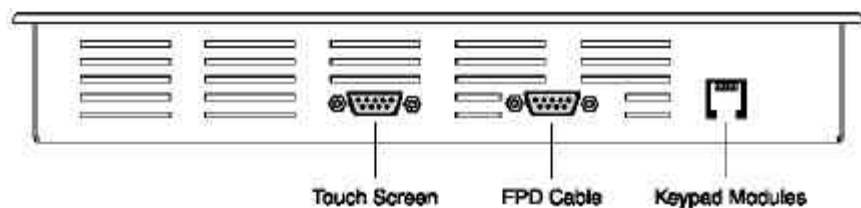
2. 5D5210.01



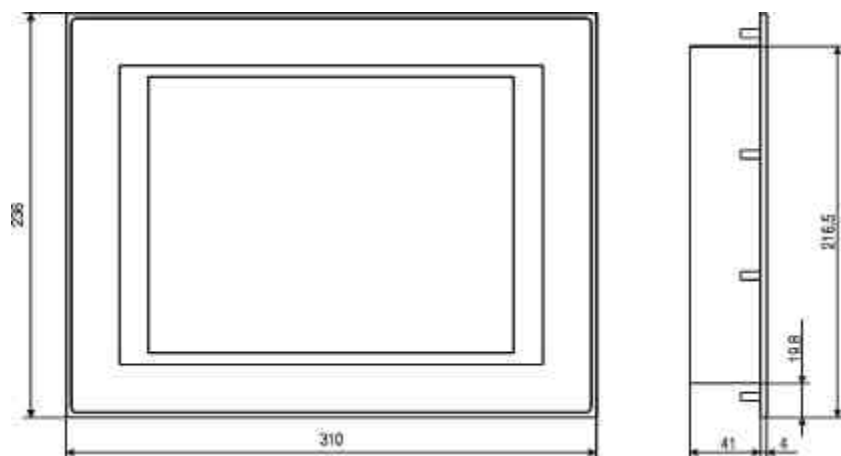
开孔尺寸



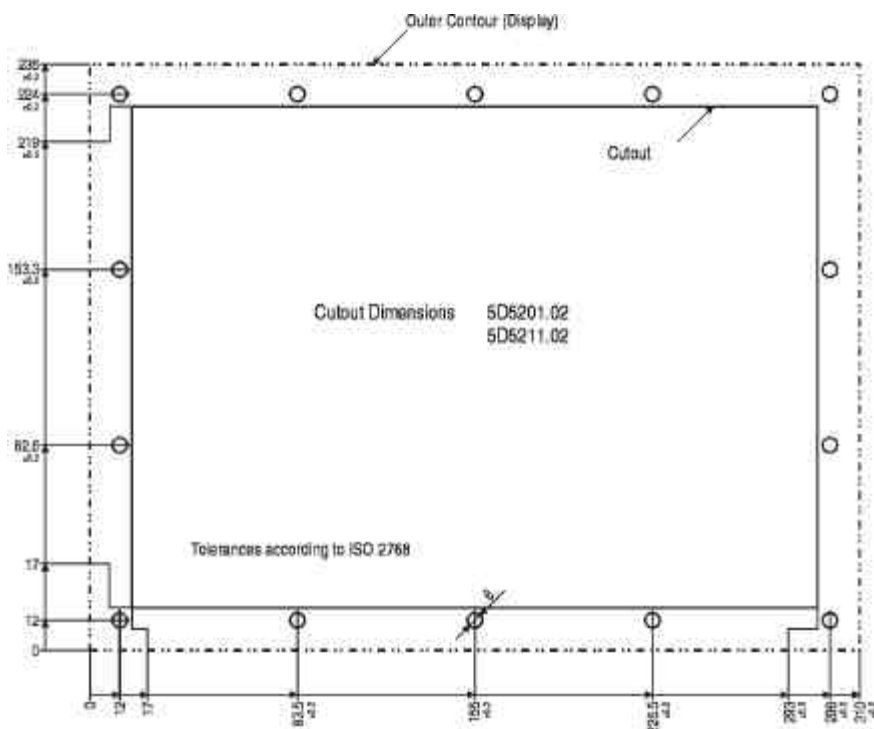
与控制器连接的接口



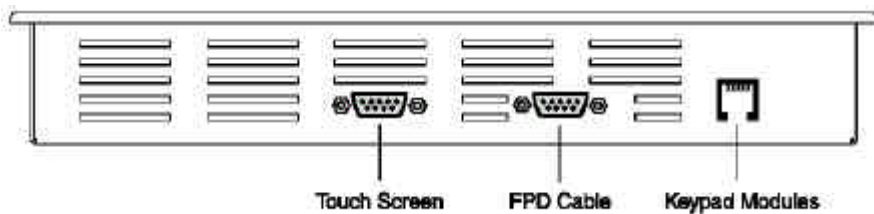
3. 5D5211.02



安装尺寸

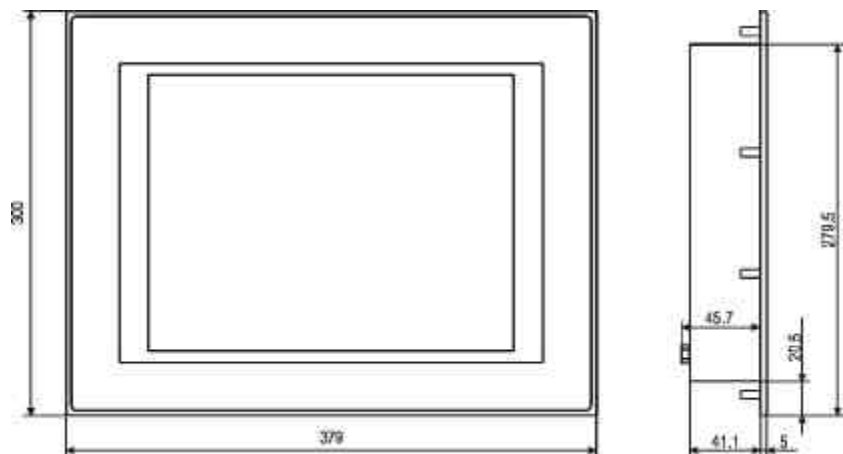


与控制器连接的接口

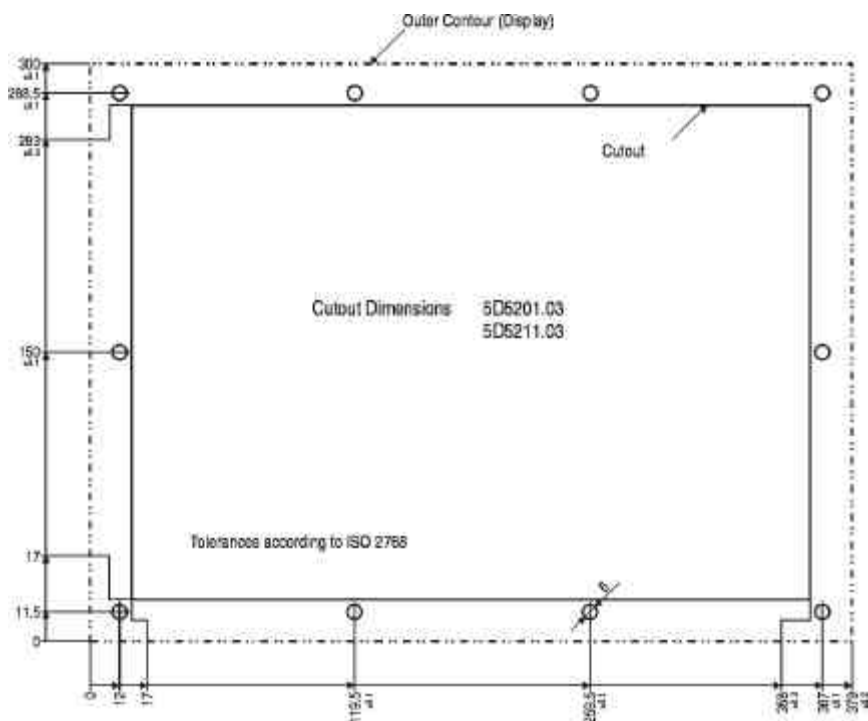


4. 5D5211.03

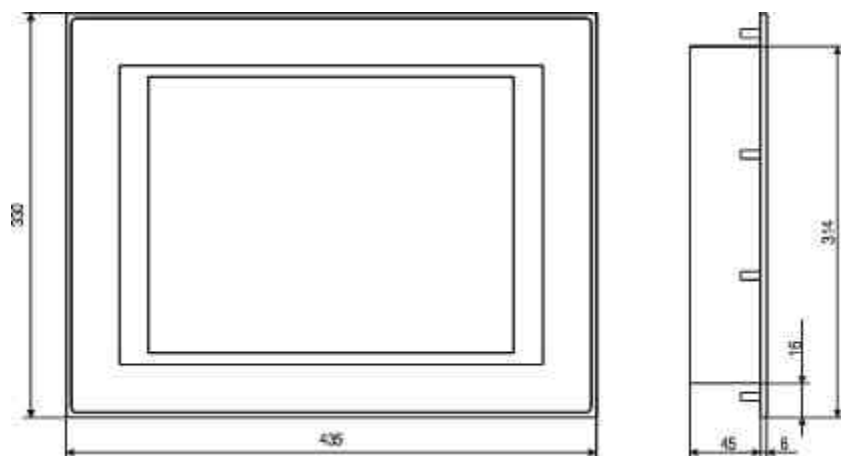
4.1 尺寸



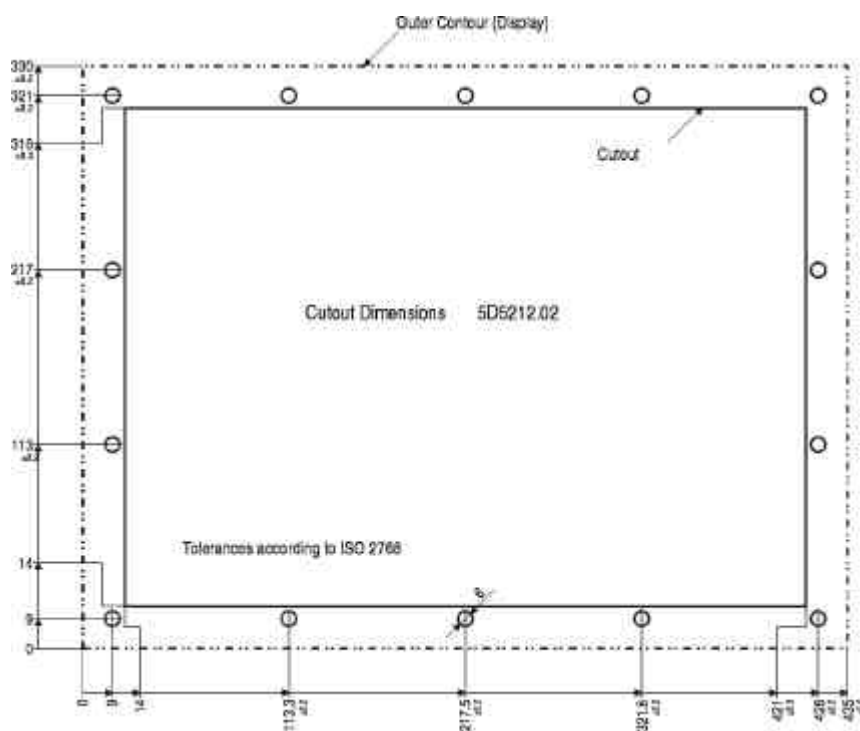
4.2 安装尺寸



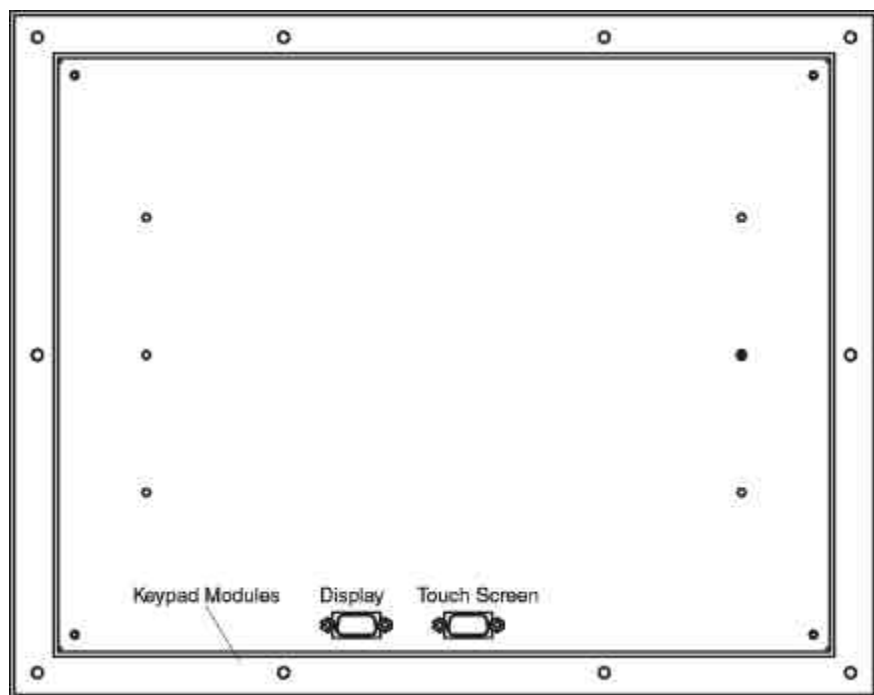
5. 5D5212.02



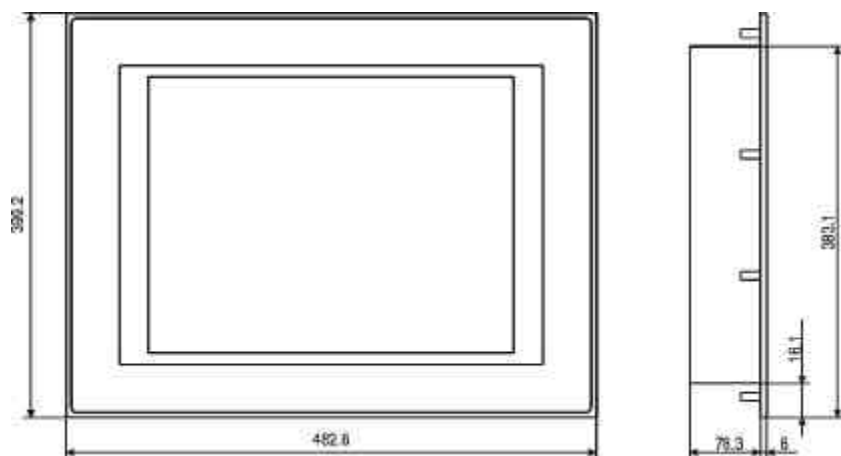
安装尺寸



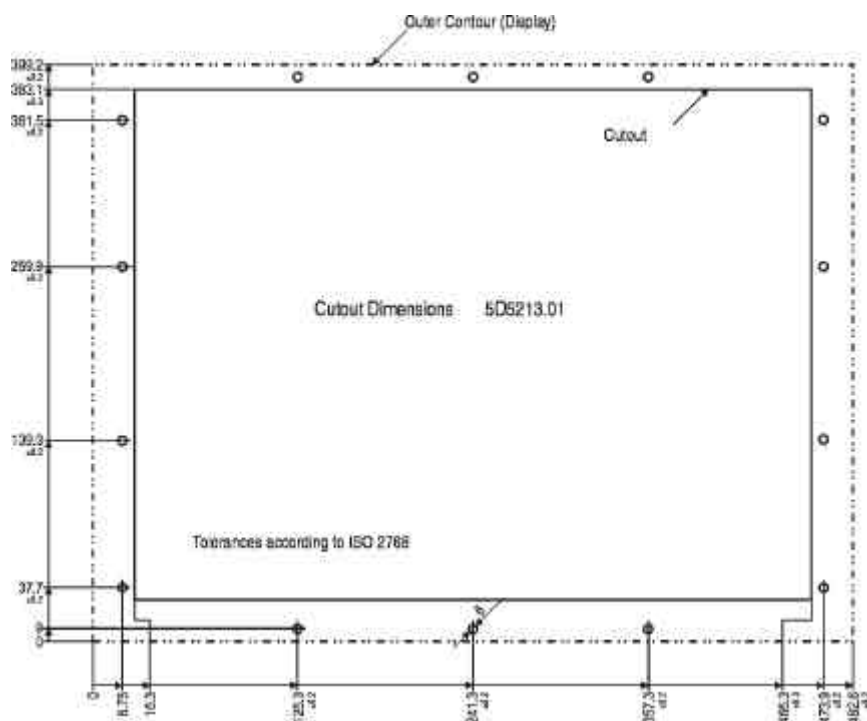
接口示意图



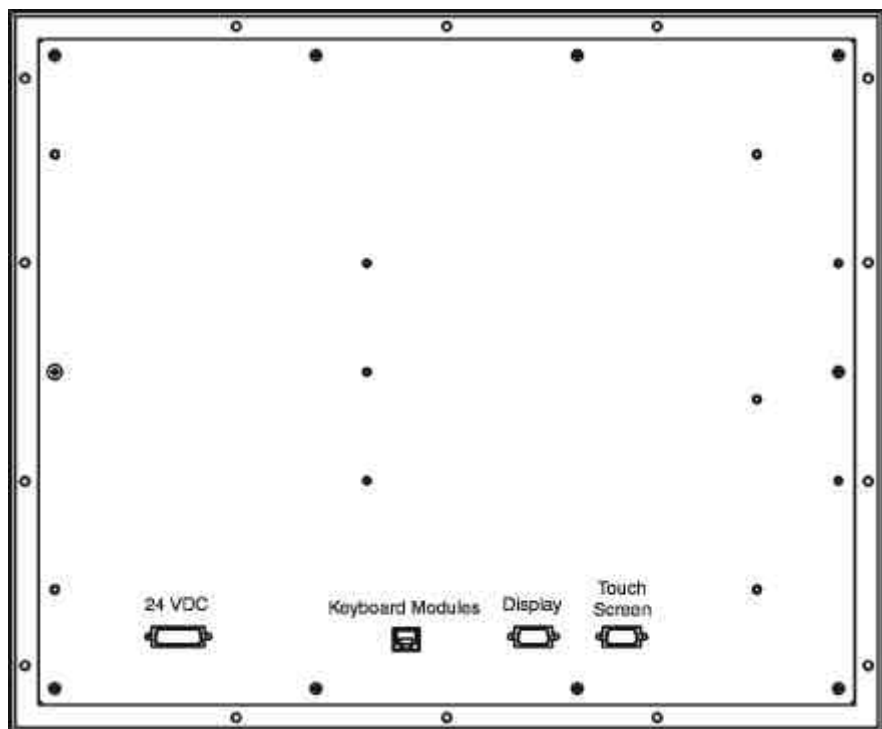
6. 5D5213.01



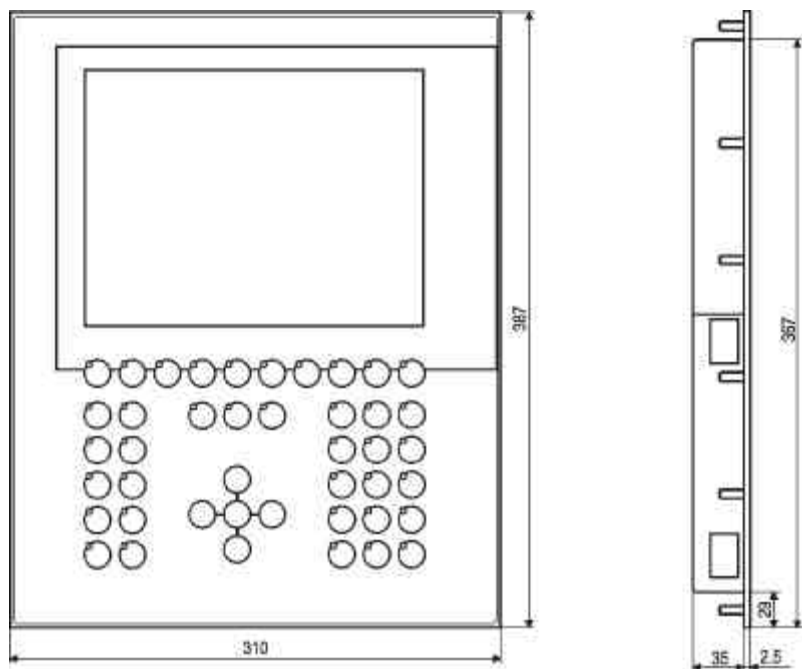
安装尺寸



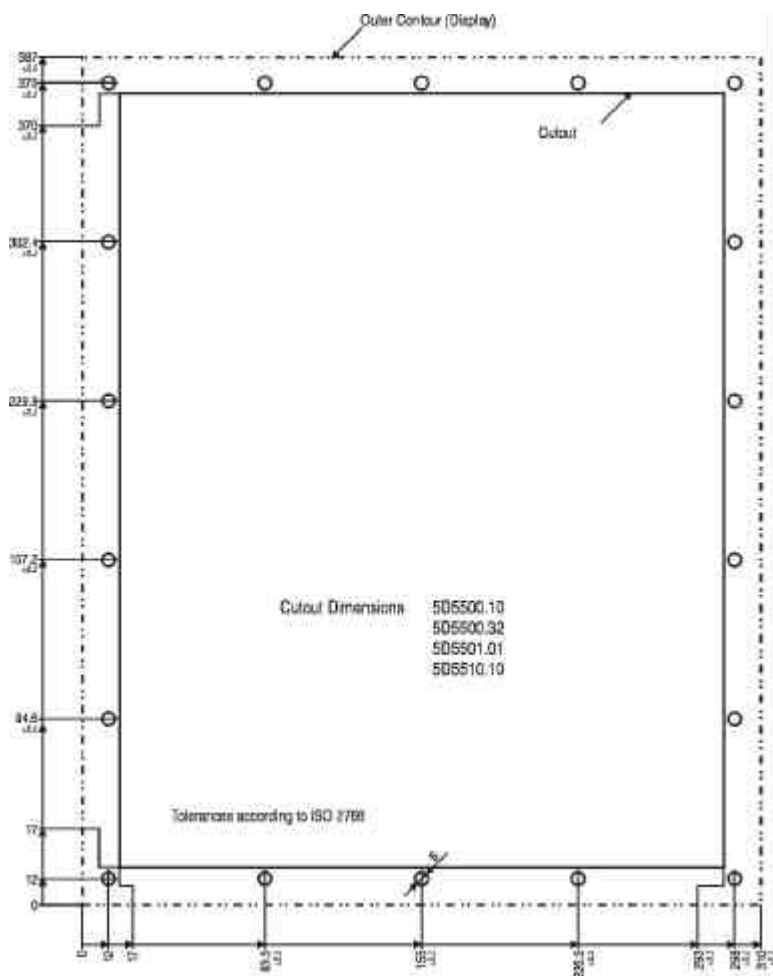
接口位置

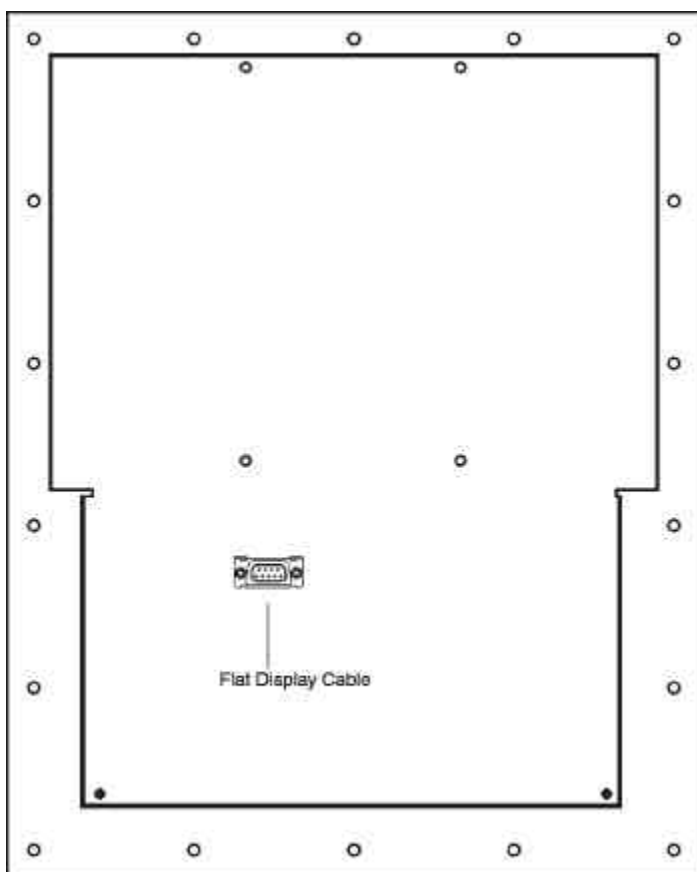


7. 5D5500.10, 5D5500.32, 5D5501.01 和 5D5510.10

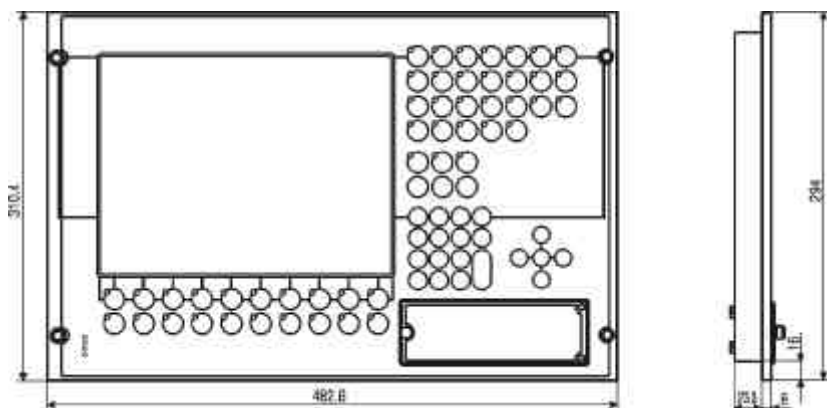


安装尺寸

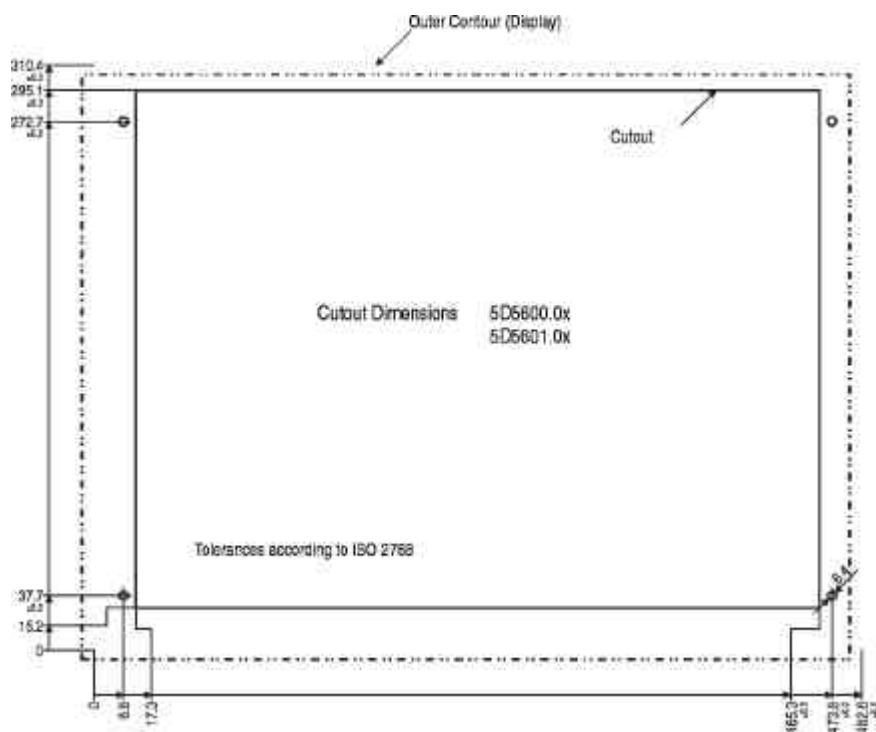




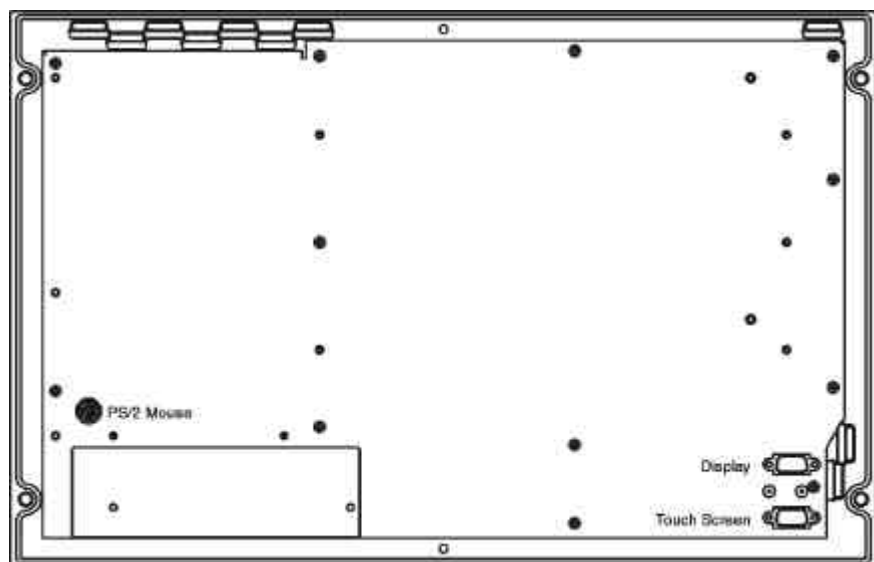
8. 5D5600.0x 和 5D5601.0x



安装尺寸



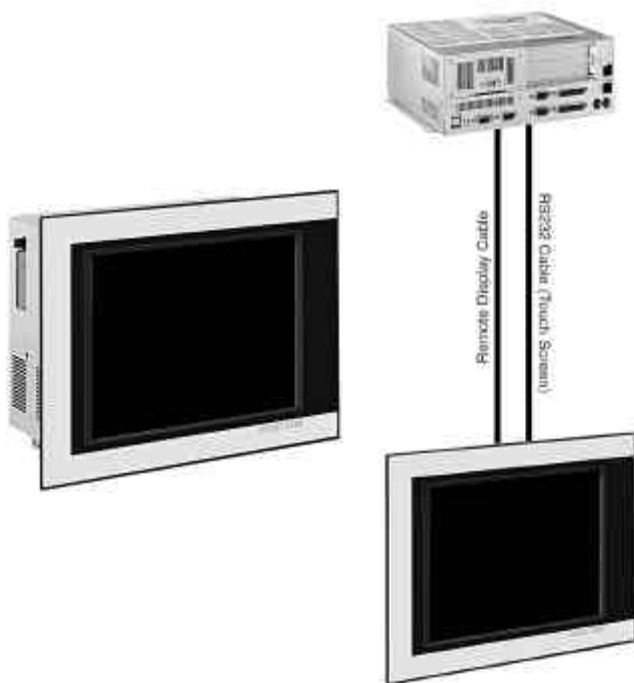
接口示意图



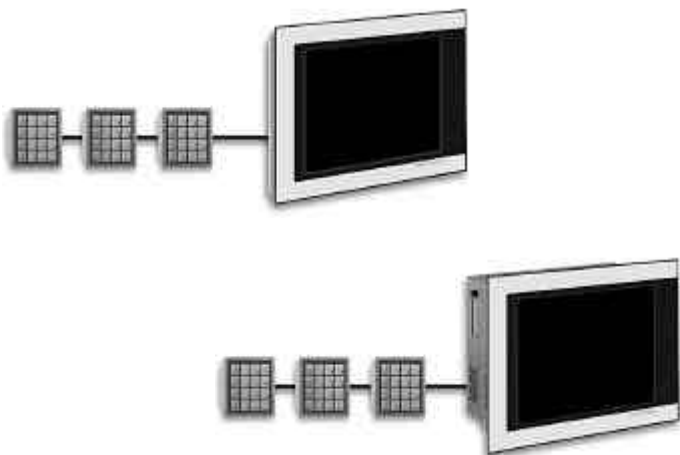
第九章 PROVIT5000 控制器单元

1. 安装

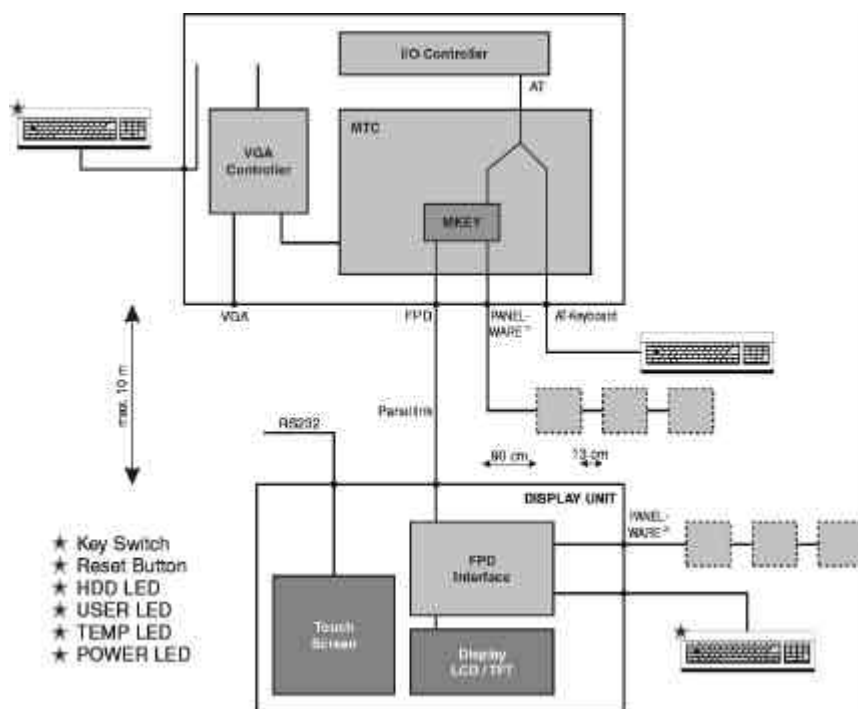
标准安装（左）与远程安装(右)



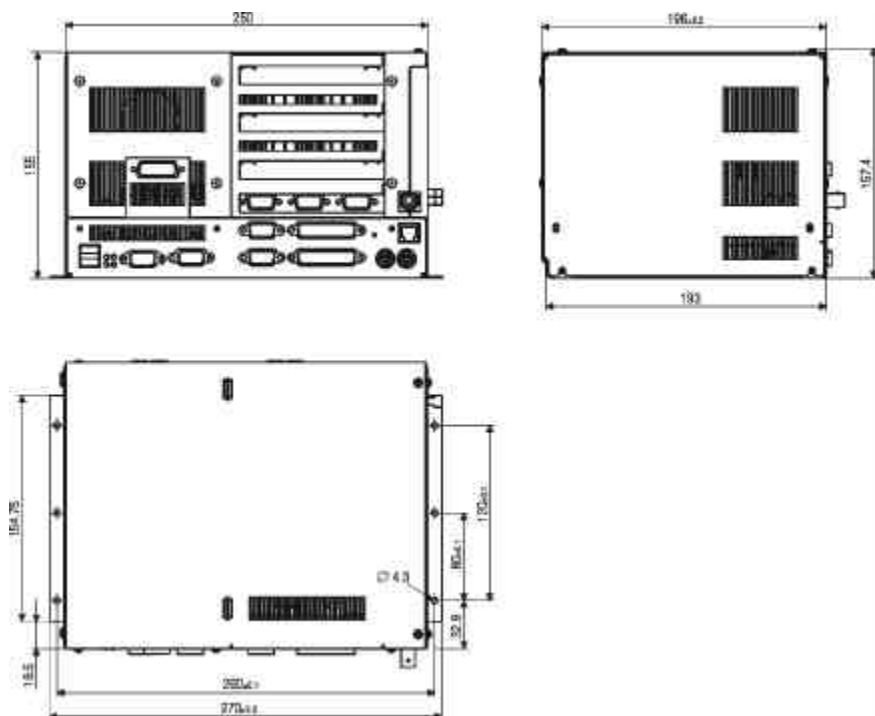
与 Panelware 模块连接



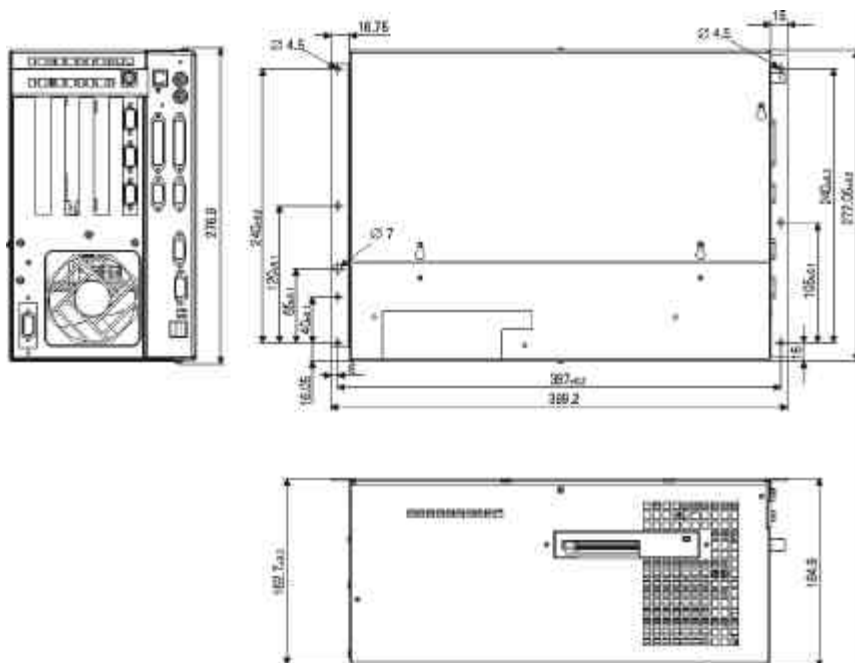
包含了控制器、显示屏、外设的示意图



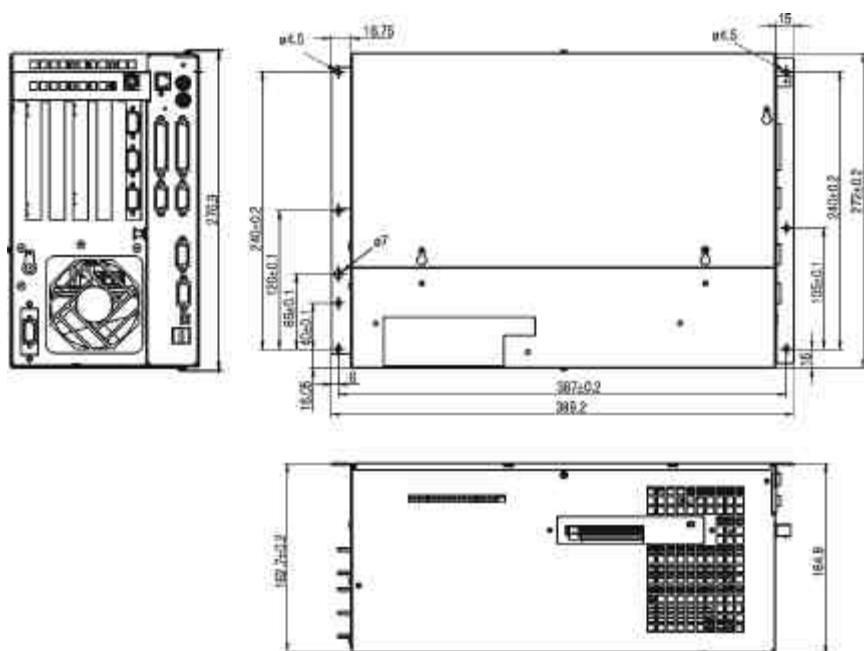
2.2 IPC5000,IPC5000C (4 槽)



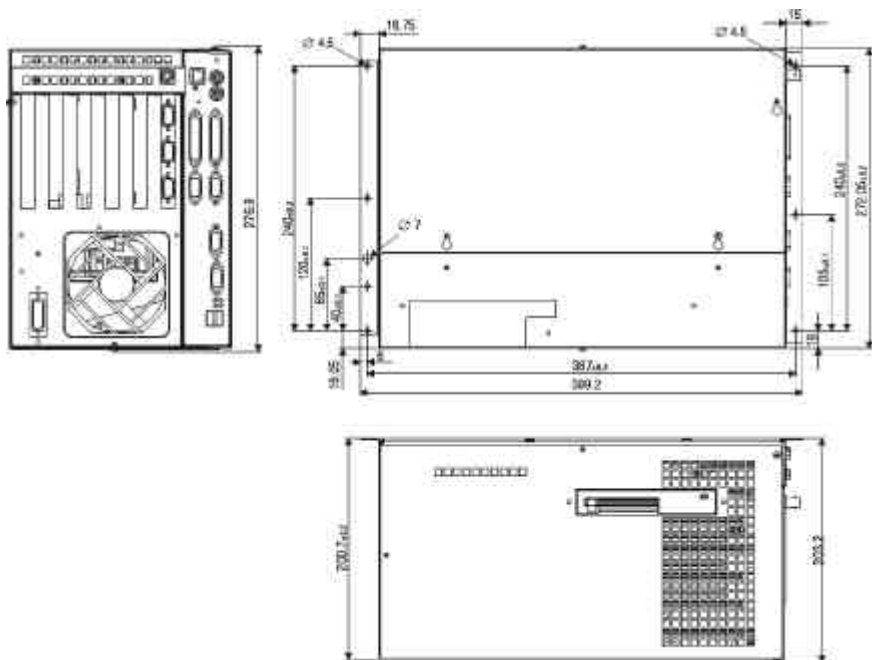
2.3 IPC5600,IPC5600C (4 槽)



2.4 IPC5600,IPC5600C (5 槽)



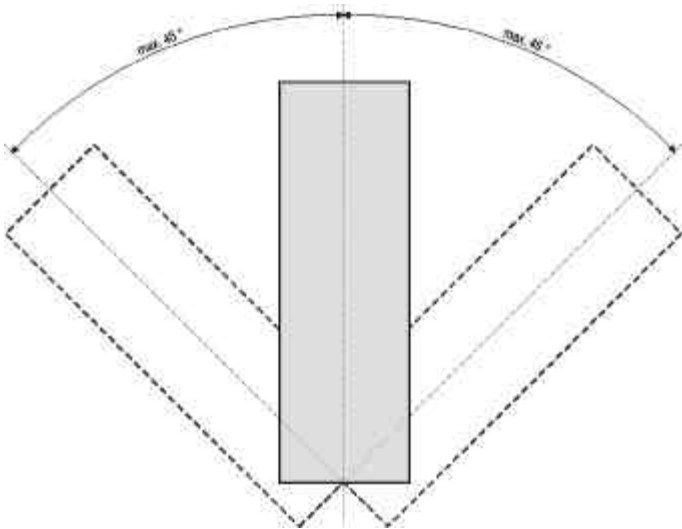
2.5 IPC5600,IPC5600C (6槽)



2.6 安装规范

- 控制器安装在显示单元的后方（标准形式），同时也支持最远达 10 米的远程安装。
- 安装时，所有接头方向朝下。
- 为了保证空气充分流通，上下方必须各留 10 厘米空间。

安装倾斜角最大为 $\pm 45^{\circ}$ 。



注意：如果在 IPC56001 IPC5600C 上操作 CD-ROM，那么安装倾斜角最大为 $\pm 25^{\circ}$ 。

3.操作温度

下表列出了 IPC5000，IPC5600，IPC5000C 以及 IPC5600C 的最大操作温度。

IPC5000 与 IPC5600

IPC5000 / IPC5600	Intel Pentium	AMD K6
无硬盘	0—55℃	0-50℃
带硬盘	5—47℃	5 – 47℃
24 小时硬盘操作	5-40℃	5-40℃

IPC 5000C

IPC5000C	无硬盘	带硬盘	24 小时硬盘操作
Intel Celeron 300/366 MHz	0—50℃	5—47 ℃	5—40 ℃
Intel Celeron 433 MHz	0—45℃ ¹⁾	5—45 ℃	5—40 ℃
Intel Celeron 566 MHz	0—45℃ ²⁾ 0—55℃ ³⁾	5—47 ℃	5—40 ℃
Intel Pentium III 600 MHz	0 —50 ℃	5—47 ℃	5—40 ℃
Intel Pentium III 850 MHz	0—40 ℃	5—40 ℃	5—40 ℃

- 1) 仅适用 5C5001.1x 系统单元
- 2) 仅适用 5C5002.14 (版本号<D0)
- 3) 仅适用 5C5002.14 (版本号从 D0 开始)

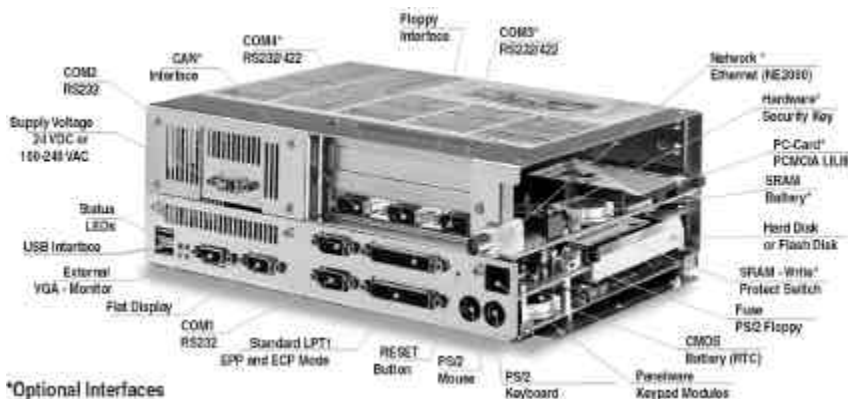
IPC5600C

IPC5600C	无硬盘	带硬盘	24 小时硬盘操作
Intel Celeron 300/366 MHz	0—50 ℃	5—47 ℃	5—40 ℃
Intel Celeron 433 MHz	0—50℃ ¹⁾	5—45 ℃	5—40 ℃
Intel Celeron 566 MHz	0—50℃ ²⁾ 0—55℃ ³⁾	5—47 ℃	5—40 ℃
Intel Pentium III 600 MHz	0 —55 ℃	5—47 ℃	5—40 ℃
Intel Pentium III 850 MHz	0 —50 ℃	5—47 ℃	5—40 ℃

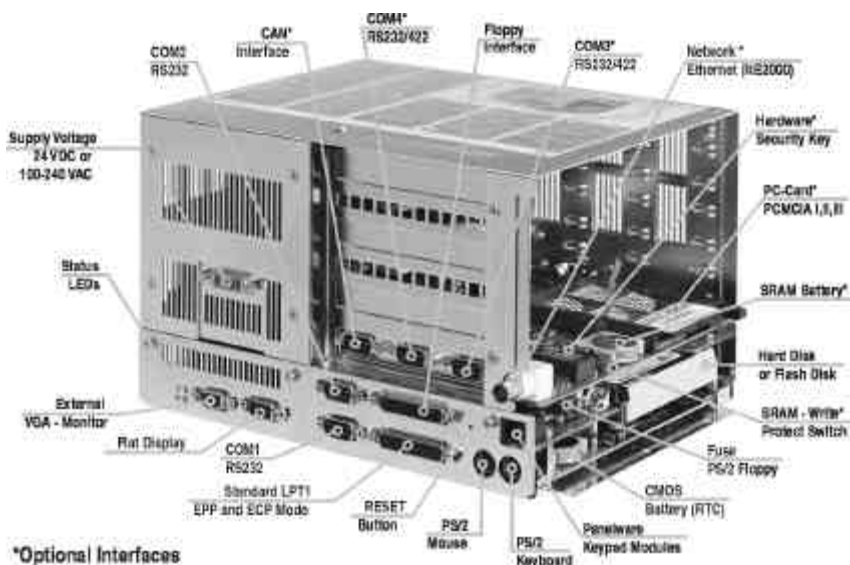
- 1) 仅适用 5C5001.1x 系统单元
- 2) 仅适用 5C5002.14 (版本号<D0)
- 3) 仅适用 5C5002.14 (版本号从 D0 开始)

4 部件一览

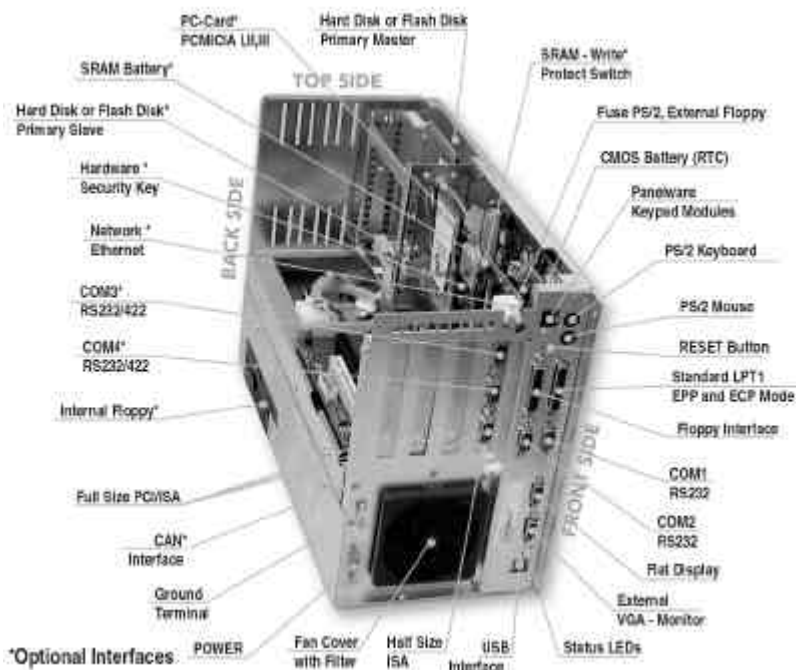
4.1 IPC5000 (2 槽)



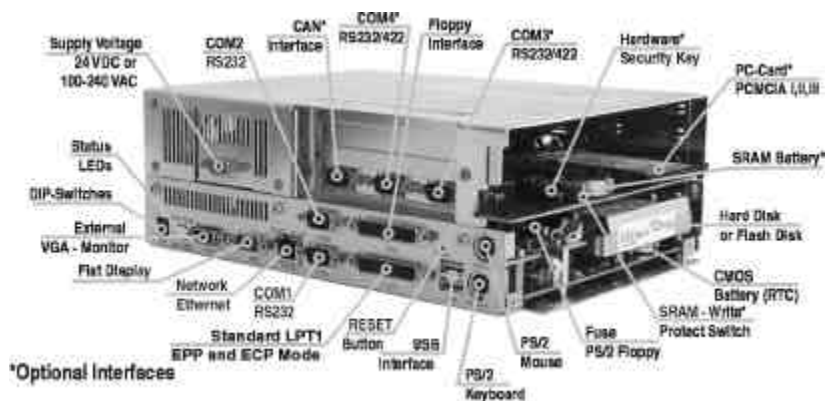
4.2 IPC5000 (4 槽)



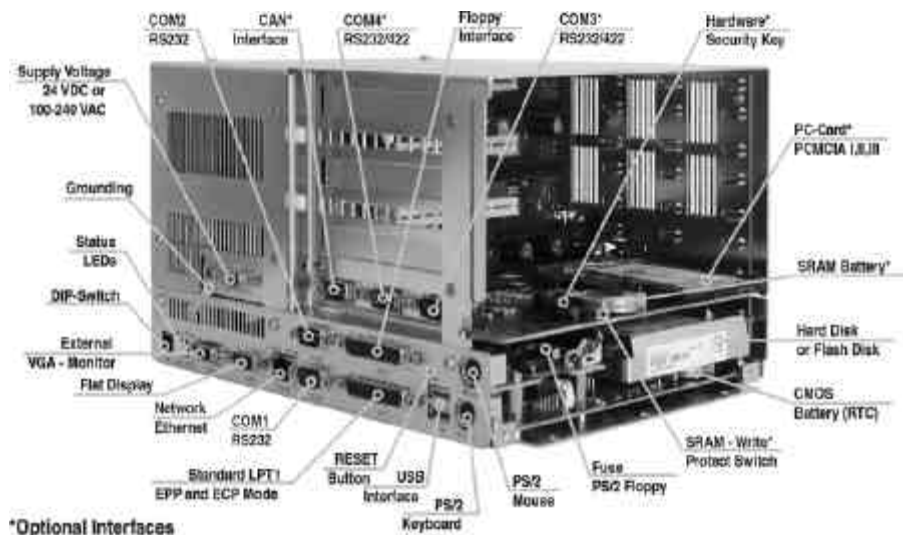
4.3 IPC5600 (4槽)



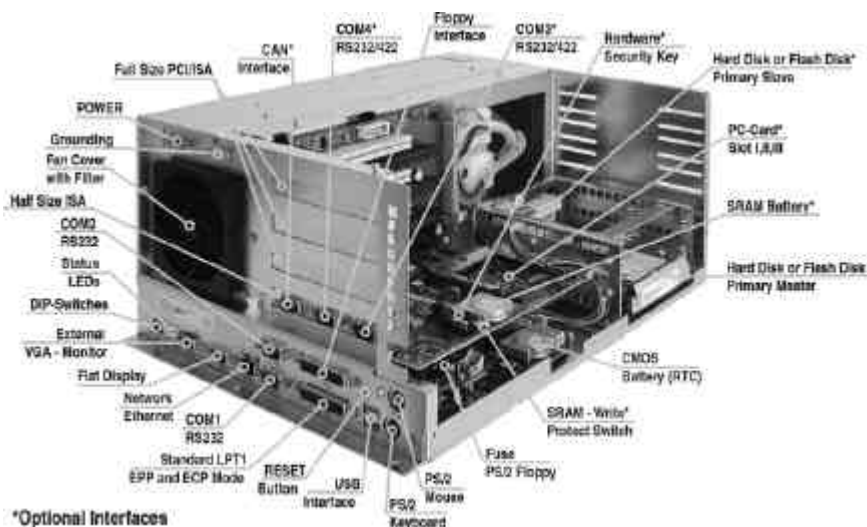
4.4 IPC5000C (2 槽)



4.5 IPC5000C (4 槽)



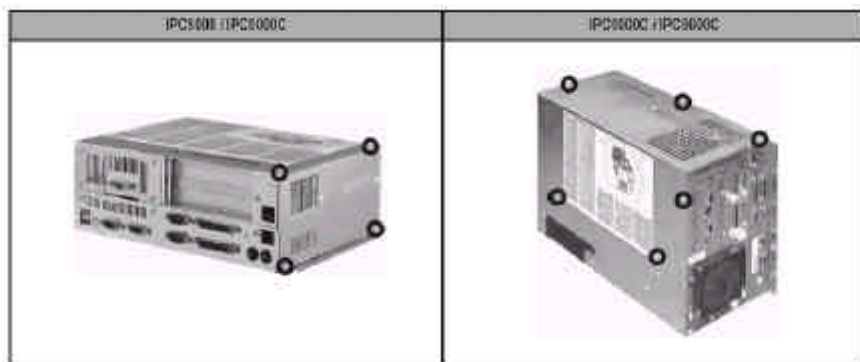
4.6 IPC5600C (4槽)



5. 维护工作

5.1 卸除外壳盖板

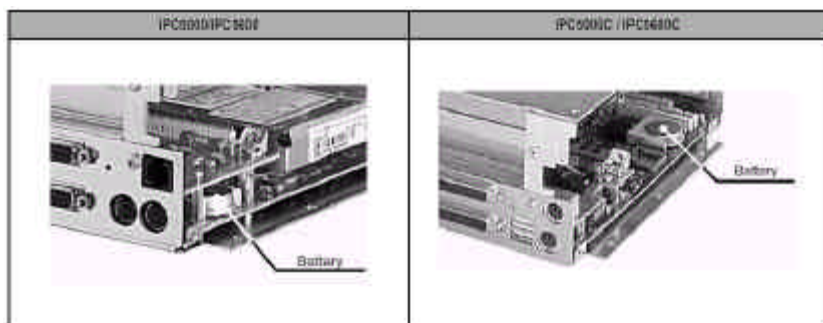
为了更换电池或保险丝，必须卸下外壳盖板。图示的螺丝必须先卸去。



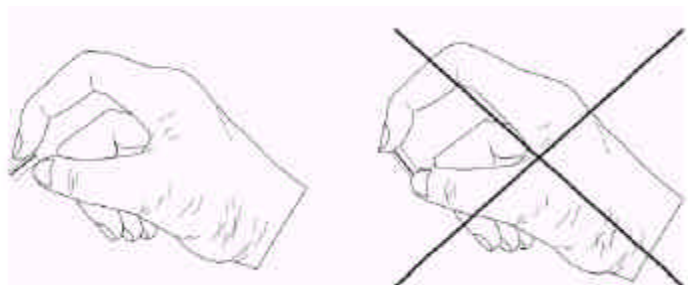
5.2 底板的维护工作

5.2.1 更换 CMOS 电池

- 1) 拔下电源线
- 2) 轻触外壳或接地端（除了电源以外!），确保将身体上静电充分释放
- 3) 卸下外壳盖板
- 4) 电池位置：



- 5) 轻拉电池起出条，从仓中取出电池。（请勿使用钳子或未绝缘的工具——有短路的危险）注意不要捏住电池的边缘。也可以使用绝缘工具取出电池。



正确

错误

- 6) 按正确的极性方向放入新电池。做法是：提起电池起出条，将电池“+”

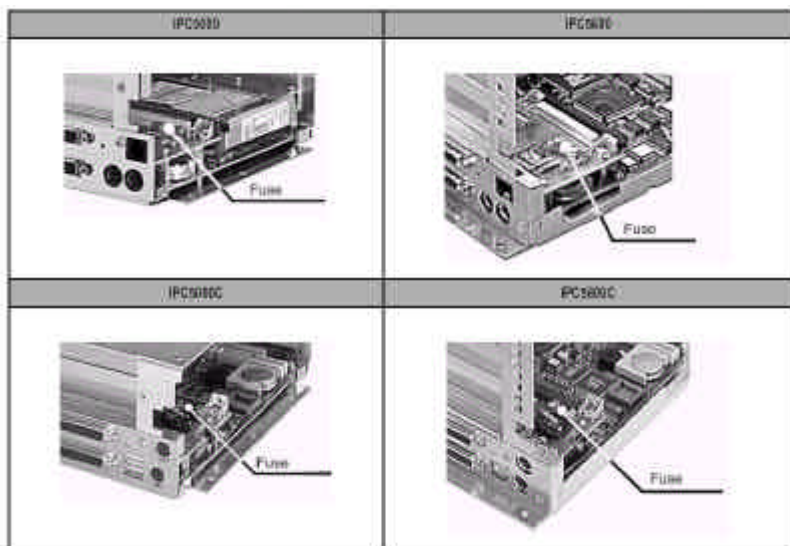
极朝下放入电池仓。为了以后能取出电池，电池起出条必须从电池仓穿出。

- 7) 然后将电池起出条从电池上方绕过，再插入电池下方，确保其未伸出电池仓外。
- 8) 放上外壳盖板，拧紧螺丝
- 9) 连接电源线
- 10) 设置日期和参数

5.2.2 更换保险丝

更换保险丝前，必须拔下电源线

- 1) 切断电源
- 2) 轻触外壳或接地端（除了电源以外!），确保 将身体上静电充分释放。
- 3) 卸下外壳盖板
- 4) 保险丝位置：

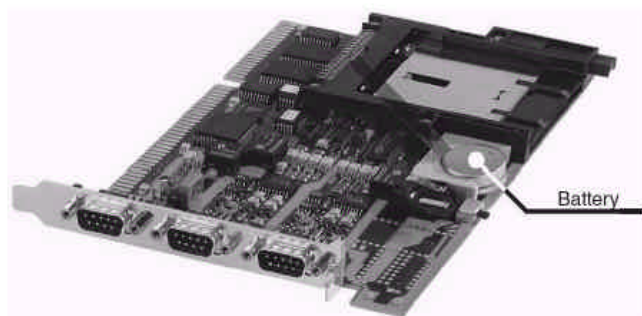


- 5) 取下旧保险丝
- 6) 装入新保险丝
- 7) 装上外壳盖板，拧紧螺丝
- 8) 插上电源线

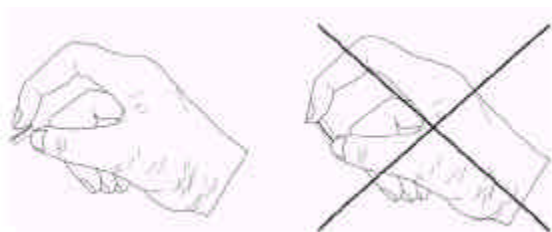
5.3 接口模块的维护工作

更换 SRAM 电池

- 1) 拔下电源线
- 2) 轻触外壳或接地端（除了电源以外!），确保将身体上静电充分释放
- 3) 卸下外壳盖板
- 4) 电池位置：



- 5) 轻拉电池起出条，从仓中取出电池。（请勿使用钳子或未绝缘的工具——有短路的危险）注意不要捏住电池的边缘。也可以使用绝缘工具取出电池。



正确

错误

- 6) 按正确的极性方向放入新电池。做法是：提起电池起出条，将电池“+”极朝下放入电池仓。为了以后能取出电池，电池起出条必须从电池仓穿出。
- 7) 然后将电池起出条从电池上方绕过，再插入电池下方，确保其未伸出电池仓外。
- 8) 放上外壳盖板，拧紧螺丝
- 9) 连接电源线